GenCore version 5.1.3

OM protein - protein search, using sw model

Run on: February 21, 2003, 12:30:08 ; Search time 34 Seconds
(without alignments)
7.838 Million cell updates/sec

Title: SHORT-PEP
Perfect score: 16
Sequence: 1 rw 2

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 908470 seqs, 133250620 residues

Total number of hits satisfying chosen parameters: 24944

Minimum DB seq length: 0
Maximum DB seq length: 5

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 100 summaries

Database : A_Geneseq_101002:*
1: /SIDS2/gcgdata/geneseq/geneseqp-embl/AA1980.DAT:*
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15: /SIDS2/gcgdata/geneseq/geneseqp-embl/AA1994.DAT:*
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22: /SIDS2/gcgdata/geneseq/geneseqp-embl/AA2001.DAT:*
23: /SIDS2/gcgdata/geneseq/geneseqp-embl/AA2002.DAT:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	16	100.0	3	15	AAR48527	Lactoferrin derive
2	16	100.0	3	15	AAR57458	Lactoferrin derive
3	16	100.0	3	15	AAR58576	Angiotensin I conv
4	16	100.0	3	15	AAR58569	Angiotensin I conv
5	16	100.0	3	16	AAR84695	Bovine lactoferrin
6	16	100.0	3	17	AAW00269	Cytokine regulator
7	16	100.0	3	17	AAR88899	Small synthetic an
8	16	100.0	3	17	AAR98551	Peptide for anti-u
9	16	100.0	3	17	AAR90605	Lactoferrin derive
10	16	100.0	3	19	AAW56234	Anti-inflammatory
11	16	100.0	3	19	AAW52449	Loop region used i
12	16	100.0	3	19	AAW41286	Apoptosis inducer
13	16	100.0	4	11	AAR07102	Melanocyte-stimula
14	16	100.0	4	14	AAR42570	Peptide correspond
15	16	100.0	4	14	AAR41642	Internalisation si
16	16	100.0	4	15	AAR48521	Lactoferrin derive
17	16	100.0	4	15	AAR48526	Lactoferrin derive
18	16	100.0	4	15	AAR57452	Lactoferrin derive
19	16	100.0	4	15	AAR57457	Lactoferrin derive
20	16	100.0	4	15	AAR57897	Integrin binding s
21	16	100.0	4	16	AAR81695	Analogue of alpha-
22	16	100.0	4	16	AAR84694	Bovine lactoferrin
23	16	100.0	4	16	AAR84689	Bovine lactoferrin
24	16	100.0	4	16	AAR75601	gp120 binding Fab
25	16	100.0	4	16	AAR75603	gp120 binding Fab
26	16	100.0	4	16	AAR87663	His-(D)Phe-Arg-(D)
27	16	100.0	4	16	AAR87659	His-(D)Phe-Arg-(D)
28	16	100.0	4	16	AAR79363	Mutant thrombospon
29	16	100.0	4	16	AAR79759	Anti-parasitic lac
30	16	100.0	4	16	AAR80260	Anti-parasitic lac
31	16	100.0	4	17	AAW77478	Tetrapeptide usefu
32	16	100.0	4	17	AAW00268	Cytokine regulator
33	16	100.0	4	17	AAW00271	Cytokine regulator
34	16	100.0	4	17	AAR98545	Peptide for anti-u
35	16	100.0	4	17	AAR98550	Peptide for anti-u
36	16	100.0	4	17	AAR91850	Lactoferrin-derive
37	16	100.0	4	17	AAR91846	Lactoferrin-derive
38	16	100.0	4	17	AAR90599	Lactoferrin derive
39	16	100.0	4	17	AAR90604	Lactoferrin derive
40	16	100.0	4	17	AAR87613	Lactoferrin-derive
41	16	100.0	4	17	AAR87618	Lactoferrin-derive
42	16	100.0	4	18	AAW45420	Cytokine regulator
43	16	100.0	4	18	AAW30863	Analgesic N-termin
44	16	100.0	4	18	AAW30473	Cytokine regulator
45	16	100.0	4	18	AAW26144	Lactoferrin deriva
46	16	100.0	4	18	AAW26148	Lactoferrin deriva
47	16	100.0	4	18	AAW14030	Anti-parasitic pep
48	16	100.0	4	18	AAW14034	Anti-parasitic pep
49	16	100.0	4	19	AAY21340	Human semaphorin I
50	16	100.0	4	19	AAW70295	Thrombus formation
51	16	100.0	4	19	AAW53220	Lactoferrin hydrol
52	16	100.0	4	19	AAW53215	Lactoferrin hydrol
53	16	100.0	4	19	AAW37732	Cytochrome P450 de
54	16	100.0	4	19	AAW41280	Apoptosis inducer
55	16	100.0	4	19	AAW41285	Apoptosis inducer
56	16	100.0	4	21	AAB29201	Melanocortin recep
57	16	100.0	4	21	AAB29202	Melanocortin recep
58	16	100.0	4	21	AAB29246	Melanocortin recep
59	16	100.0	4	21	AAB12705	Tetrapeptide messa
60	16	100.0	4	21	AAY95384	Cyclic peptide Q14
61	16	100.0	4	21	AAY95385	Cyclic peptide Q15
62	16	100.0	4	21	AAY96494	Factor VIII bindin
63	16	100.0	4	21	AAY97983	Phage library neov
64	16	100.0	4	21	AAY92405	C35 deletion mutan
65	16	100.0	4	21	AAY85380	IL-2 derived anti-
66	16	100.0	4	21	AAY80507	Human melanocyte s
67	16	100.0	4	21	AAY77732	Peptide used in th
68	16	100.0	4	21	AAY54491	Peptide used to tr
69	16	100.0	4	21	AAY54495	Peptide used to tr
70	16	100.0	4	21	AAY69869	Analogue of alpha-
71	16	100.0	4	21	AAY67189	Cytokine regulator
72	16	100.0	4	21	AAY56532	Peptide SEQ ID NO:
73	16	100.0	4	21	AAY56536	Peptide SEQ ID NO:
74	16	100.0	4	22	AAG78952	Antimicrobial pept
75	16	100.0	4	22	AAG78953	Antimicrobial pept
76	16	100.0	4	22	AAG78954	Antimicrobial pept
77	16	100.0	4	22	AAG78955	Antimicrobial pept
78	16	100.0	4	22	AAU10106	Melanocortin-4 rec
79	16	100.0	4	22	AAG71025	Melanocortin recep
80	16	100.0	4	22	AAG71035	Melanocortin recep
81	16	100.0	4	22	AAG71041	Melanocortin recep
82	16	100.0	4	22	AAG71047	Melanocortin recep
83	16	100.0	4	22	AAG71063	Melanocortin recep

84	16	100.0	4	22	AAG71192	Melanocortin recep
85	16	100.0	4	22	AAG71233	Melanocortin recep
86	16	100.0	4	22	AAB67268	Sexual dysfunction
87	16	100.0	4	22	AAB61544	alpha-melanocyte-s
88	16	100.0	4	22	AAB66335	Alpha melanotropin
89	16	100.0	4	23	AAU78853	Antimicrobial pept
90	16	100.0	4	23	AAU78854	Antimicrobial pept
91	16	100.0	4	23	AAU78855	Antimicrobial pept
92	16	100.0	4	23	AAU78856	Antimicrobial pept
93	16	100.0	4	23	AAU78857	Antimicrobial pept
94	16	100.0	4	23	AAU78858	Antimicrobial pept
95	16	100.0	4	23	AAU78860	Antimicrobial pept
96	16	100.0	4	23	AAU78861	Antimicrobial pept
97	16	100.0	4	23	AAU78862	Antimicrobial pept
98	16	100.0	4	23	AAU78863	Antimicrobial pept
99	16	100.0	4	23	AAU78864	Antimicrobial pept
100	16	100.0	4	23	AAU78865	Antimicrobial pept

ALIGNMENTS

RESULT 1
AAR48527
ID AAR48527 standard; peptide; 3 AA.
XX
AC AAR48527;
XX
DT 10-AUG-1994 (first entry)
XX
DE Lactoferrin derived peptide #21.
XX
KW Decomposition; lactoferrin; digestion; enzyme; pepsin; trypsin;
KW antioxidant; oxidation; inhibitor; vitamin E; ascorbic acid;
KW vitamin A; beta-carotene; superoxidase dismutase; coenzyme Q;
KW lipid oxidation; foodstuff; drugs; health food; toiletries; cosmetics.
XX
OS Bos taurus.
XX
PN WO9403555-A.
XX
PD 17-FEB-1994.
XX
PF 04-AUG-1993; 93WO-JP01090.
XX
PR 07-AUG-1992; 92JP-0211335.
XX
PA (MORG) MORINAGA MILK IND CO LTD.
XX
PI Bellamy WR, Fukuwatari Y, Kawase K, Shimamura S;
PI Takase M, Tokiday, Tomita M, Wakabayashi H, Yamauchi K;
XX
DR WPI; 1994-065650/08.
XX
PT Antioxidant peptide lactoferrin decomposition product - prevents
PT oxidation of lipid(s) in foodstuffs and drugs without affecting
PT their taste
XX
PS Claim 3; Page 34; 47pp; Japanese.
XX
CC The sequences given in AAR48507-37 are peptides derived by the
CC decomposition of lactoferrin, pref. by digestion with an enzyme, eg.
CC pepsin or trypsin. These peptides may be used in an antioxidant
CC composition which may also contain an oxidation inhibitor such as
CC vitamin E, ascorbic acid, vitamin A, beta-carotene, superoxidase
CC dismutase or coenzyme Q. The antioxidant prevents lipid oxidation
CC in foodstuffs, drugs, health foods, toiletries and cosmetics.
XX
SQ Sequence 3 AA;

Query Match 100.0%; Score 16; DB 15; Length 3;
Best Local Similarity 100.0%; Pred. No. 7.8e+05;
Matches 2; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 RW 2
||
Db 1 RW 2

RESULT 2
AAR57458
ID AAR57458 standard; Protein; 3 AA.
XX
AC AAR57458;
XX
DT 28-FEB-1995 (first entry)
XX
DE Lactoferrin derived peptide #21.
XX
KW Lactoferrin; chemical; enzymatic; hydrolysis; antimicrobial;
KW antiseptic; ischaemic disease.
XX
OS Mus musculus.
XX
PN JP06172200-A.
XX
PD 21-JUN-1994.
XX
PF 08-DEC-1992; 92JP-0327738.
XX
PR 08-DEC-1992; 92JP-0327738.
XX
PA (MORG) MORINAGA MILK IND CO LTD.
XX
DR WPI; 1994-238662/29.
XX
PT Brain protectant for preventing ischaemic diseases without side
PT effects - comprising 31 specified peptide(s), prepd. by
PT lactoferrin hydrolysis
XX
PS Disclosure; Page 9; 11pp; Japanese.
XX
CC The sequences given in AAR57438-68 represent fragments of lactoferrin
CC which were derived from the full lenth protein by chemical or enzyme
CC hydrolysis. These peptides have brain protecting properties, as
CC well as anti-microbial activity. Compositions containing these
CC peptides may be prepared with out the addition of antiseptics, and
CC may be administered at doses of at least 10 mg for parenteral
CC administration and 100 mg for oral administration. These peptides
CC are stable, heat resistant, water soluble and may be used for the
CC prevention of ischaemic diseases without side effects.
XX
SQ Sequence 3 AA;

Query Match 100.0%; Score 16; DB 15; Length 3;
Best Local Similarity 100.0%; Pred. No. 7.8e+05;
Matches 2; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 RW 2
||
Db 1 RW 2

RESULT 3
AAR58576
ID AAR58576 standard; peptide; 3 AA.
XX
AC AAR58576;
XX
DT 26-APR-1995 (first entry)
XX
DE Angiotensin I converting enzyme inhibitory tripeptide FRW.
XX
KW angiotensin converting enzyme; inhibitor; food ingredient.
XX
OS Synthetic.

```
XX
PN   JP06220088-A.
XX
PD   09-AUG-1994.
XX
PF   22-JAN-1993;   93JP-0025977.
XX
PR   22-JAN-1993;   93JP-0025977.
XX
PA   (ASAH ) ASAHI KASEI KOGYO KK.
XX
DR   WPI; 1994-290911/36.
XX
PT   New tri:peptide(s) - inhibit angiotensin I converting enzyme
XX
PS   Claim 1; Page 2; 4pp; Japanese.
XX
CC   This is one of thirteen claimed tripeptides (AAR58569-R58581) which
CC   inhibit angiotensin I converting enzyme (with IC50 of 2.9-186.2
CC   micromolar). The tripeptides are incorporated into food, e.g.
CC   hamburgers.
XX
SQ   Sequence   3 AA;

  Query Match             100.0%;  Score 16;  DB 15;  Length 3;
  Best Local Similarity   100.0%;  Pred. No. 7.8e+05;
  Matches    2;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 RW 2
          ||
Db      2 RW 3


RESULT 4
AAR58569
ID   AAR58569 standard; peptide; 3 AA.
XX
AC   AAR58569;
XX
DT   26-APR-1995  (first entry)
XX
DE   Angiotensin I converting enzyme inhibitory tripeptide LRW.
XX
KW   angiotensin converting enzyme; inhibitor; food ingredient.
XX
OS   Synthetic.
XX
PN   JP06220088-A.
XX
PD   09-AUG-1994.
XX
PF   22-JAN-1993;   93JP-0025977.
XX
PR   22-JAN-1993;   93JP-0025977.
XX
PA   (ASAH ) ASAHI KASEI KOGYO KK.
XX
DR   WPI; 1994-290911/36.
XX
PT   New tri:peptide(s) - inhibit angiotensin I converting enzyme
XX
PS   Claim 1; Page 2; 4pp; Japanese.
XX
CC   This is one of thirteen claimed tripeptides (AAR58569-R58581) which
CC   inhibit angiotensin I converting enzyme (with IC50 of 2.9-186.2
CC   micromolar). The tripeptides are incorporated into food, e.g.
CC   hamburgers.
XX
SQ   Sequence   3 AA;

  Query Match             100.0%;  Score 16;  DB 15;  Length 3;
  Best Local Similarity   100.0%;  Pred. No. 7.8e+05;
  Matches    2;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 RW 2
          ||
Db      2 RW 3


RESULT 5
AAR84695
ID   AAR84695 standard; peptide; 3 AA.
XX
AC   AAR84695;
XX
DT   13-JUN-1996  (first entry)
XX
DE   Bovine lactoferrin derived angina pectoris treating peptide.
XX
KW   Bovine lactoferrin; angina pectoris; treatment; low toxicity;
KW   no side effects; heat resistance; water solubility; stability;
KW   aqueous solution; preservative free.
XX
OS   Bos taurus.
XX
PN   JP07278011-A.
XX
PD   24-OCT-1995.
XX
PF   01-APR-1994;   94JP-0085243.
XX
PR   01-APR-1994;   94JP-0085243.
XX
PA   (MORG ) MORINAGA MILK IND CO LTD.
XX
DR   WPI; 1995-400916/51.
XX
PT   Peptide for treatment of angina pectoris - has low toxicity and is
PT   heat resistant and water soluble
XX
PS   Claim 1; Page 10; 12pp; Japanese.
XX
CC   The present peptide is a bovine lactoferrin derived, angina
CC   pectoris treatative agent. It has low toxicity and side effects,
CC   is heat resistant, water soluble and stable in an aq. soln.. It
CC   also requires no preservative.
XX
SQ   Sequence   3 AA;

  Query Match             100.0%;  Score 16;  DB 16;  Length 3;
  Best Local Similarity   100.0%;  Pred. No. 7.8e+05;
  Matches    2;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 RW 2
          ||
Db      1 RW 2


RESULT 6
AAW00269
ID   AAW00269 standard; peptide; 3 AA.
XX
AC   AAW00269;
XX
DT   30-APR-1997  (first entry)
XX
DE   Cytokine regulatory peptide #4.
XX
KW   Cytokine regulatory peptide; disuse deconditioning; IL-10;
KW   nitric oxide; adverse drug reaction; obesity; septic shock;
KW   cancer chemotherapy; organ transplant; cachexia; cyclosporin;
KW   adult respiratory distress syndrome; ARDS; autoimmune disease;
KW   allergic reaction; anaphylaxis; arthritis; inflammatory bowel disease;
KW   diabetes; glomerulonephritis; systemic lupus erythematosus;
KW   transplant; atherosclerosis; organ damage; immunosuppressant.
XX
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OS   Synthetic.
XX
FH   Key             Location/Qualifiers
FT   Misc-difference 1
FT                   /note= "D-form residue"
FT   Misc-difference 3
FT                   /note= "D-form residue"
XX
PN   WO9627386-A1.
XX
PD   12-SEP-1996.
XX
PF   05-MAR-1996;   96WO-US03112.
XX
PR   12-SEP-1995;   95US-0527056.
PR   06-MAR-1995;   95US-0400983.
PR   07-JUN-1995;   95US-0484262.
XX
PA   (HOUG-) HOUGHTEN PHARM INC.
XX
PI   Andablibi A,  Basu A,  Fagan P,  Girten BE,  Houghten RA;
PI   Loullis CC,  Omholt P,  Suto MJ,  Tuttle RR,  Weber PA;
XX
DR   WPI; 1996-425217/42.
XX
PT   Cytokine regulatory agents modified at the amino or carboxy terminus
PT   - for controlling e.g. diabetes, obesity, septic shock, side
PT   effects of cancer therapy
XX
PS   Claim 14; Page 76; 90pp; English.
XX
CC   The sequences given in AAW00266-72 represent cytokine regulatory
CC   peptides which are modified at the amino or carboxy terminus.  These
CC   peptides are used to enhance or restrain cytokine activity and to treat
CC   e.g. disuse deconditioning, IL-10 activity diseases mediated by nitric
CC   oxide and cytokines, adverse drug reactions, obesity, septic shock and
CC   adverse side effects due to cancer chemotherapy or occurring as in
CC   response to organ transplantation, immune, inflammatory and healing
CC   process disorders, pain, cachexia, adult respiratory distress syndrome
CC   (ARDS), autoimmune diseases esp. allergic reactions or anaphylaxis,
CC   arthritis, inflammatory bowel disease, diabetes, glomerulonephritis,
CC   systemic lupus erythematosus, transplant, atherosclerosis and parasitic
CC   mediated immune dysfunctions such as charged disease, esp. organ damage
CC   caused by ischaemia reperfusion or immunosuppressant partic. cyclosporin.
CC    The peptides also act to increase the oxygen consumption of a subject.
XX
SQ   Sequence   3 AA;

  Query Match             100.0%;  Score 16;  DB 17;  Length 3;
  Best Local Similarity   100.0%;  Pred. No. 7.8e+05;
  Matches    2;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 RW 2
          ||
Db      2 RW 3


RESULT 7
AAR88899
ID   AAR88899 standard; peptide; 3 AA.
XX
AC   AAR88899;
XX
DT   29-OCT-1996  (first entry)
XX
DE   Small synthetic antibiotic peptide for treating fungal infection.
XX
KW   Antibiotic; antifungal; plant infection; horticultural; pesticide;
KW   growth inhibition; Fusarium; Rhizoctonia; Ceratocystis; Pythium;
KW   Mycosphaerella; Candida; fungus.
XX
OS   Synthetic.
XX
FH   Key             Location/Qualifiers
FT   Misc-difference 1..3
FT                   /note= "at least one amino acid is pref. in D form"
XX
PN   WO9608264-A1.
XX
PD   21-MAR-1996.
XX
PF   13-SEP-1995;   95WO-US11724.
XX
PR   13-SEP-1994;   94US-0305768.
XX
PA   (CERE-) CERES TECHNOLOGIES INC.
XX
PI   Edwards DL;
XX
DR   WPI; 1996-179719/18.
XX
PT   New tri- to hexa-peptide antibiotics - used partic. for inhibiting
PT   fungal growth in plants and plant prods. and for treating fungal
PT   infections
XX
PS   Claim 1; Page 27; 52pp; English.
XX
CC   AAR88873-R888903 are antifungal peptides used for inhibiting the growth
CC   of fungi species Fusarium, Rhizoctonia, Ceratocystis, Pythium,
CC   Mycosphaerella and Candida. The peptides inhibit fungal growth in
CC   agricultural and horticultural crops, they are partic. useful in
CC   treating fungally damaged seeds, seedlings and trees. They have a
CC   high specificity to the target fungi and a low toxicity and they
CC   control fungal persistence in the environment. The peptides are also
CC   used to treat pathogen infections such as yeast infections in animals
CC   and man.
CC   N.B. Sequences given are taken from the disclosure of the
CC   specification, those given in the SEQ ID listing correspond to the
CC   sequences given but in the reverse order e.g. AAR88873 is given as
CC   FRXXXX (as it is given in the disclosure), but the same sequence is
CC   referred to as SEQ ID number 1 which appears as XXXXRF in the SEQ ID
CC   listing.
XX
SQ   Sequence   3 AA;

  Query Match             100.0%;  Score 16;  DB 17;  Length 3;
  Best Local Similarity   100.0%;  Pred. No. 7.8e+05;
  Matches    2;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 RW 2
          ||
Db      2 RW 3


RESULT 8
AAR98551
ID   AAR98551 standard; Peptide; 3 AA.
XX
AC   AAR98551;
XX
DT   12-NOV-1996  (first entry)
XX
DE   Peptide for anti-ulcer agent.
XX
KW   anti-ulcer agent; low toxicity; stable; heat-resistant.
XX
OS   Synthetic.
XX
PN   JP08143468-A.
XX
PD   04-JUN-1996.
XX
PF   17-NOV-1994;   94JP-0283869.
XX
PR   17-NOV-1994;   94JP-0283869.
XX
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PA   (MORG ) MORINAGA MILK IND CO LTD.
XX
DR   WPI; 1996-318857/32.
XX
PT   Anti-ulcer agent contg. peptide - has low toxicity, is
PT   heat-resistant and water-soluble
XX
PS   Claim 1; Page 10; 11pp; Japanese.
XX
CC   AAR98531-54 are peptides used in an anti-ulcer agent.  The agent is low
CC   in toxicity, is heat-resistant and stable in aqueous soln..  It can be
CC   administered orally and be produced in large amounts.
XX
SQ   Sequence   3 AA;

  Query Match            100.0%;  Score 16;  DB 17;  Length 3;
  Best Local Similarity  100.0%;  Pred. No. 7.8e+05;
  Matches    2;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 RW 2
          ||
Db      1 RW 2


RESULT 9
AAR90605
ID   AAR90605 standard; peptide; 3 AA.
XX
AC   AAR90605;
XX
DT   10-JUL-1996  (first entry)
XX
DE   Lactoferrin derived peptide #21.
XX
KW   Lactoferrin; antitumour; therapy; tumour; parenteral administration;
KW   thermostable; cytotoxic; antibacterial.
XX
OS   Synthetic.
XX
PN   JP07309771-A.
XX
PD   28-NOV-1995.
XX
PF   17-MAY-1994;   94JP-0103109.
XX
PR   17-MAY-1994;   94JP-0103109.
XX
PA   (MORG ) MORINAGA MILK IND CO LTD.
XX
DR   WPI; 1996-045317/05.
XX
PT   Antitumour agent, derived from lactoferrin, for parenteral
PT   administration - has few side effects and is thermally stable and
PT   water soluble
XX
PS   Claim 1; Page 8; 10pp; Japanese.
XX
CC   AAR90585-R90613 represent lactoferrin derived peptides.  These sequences
CC   can be used as antitumour agents for parenteral administration.  The
CC   sequences are thermally stable, water soluble and stable in water.
CC   These peptide sequences are only cytotoxic to tumour cells.
CC   Administration of these sequences results in few side effects.  No
CC   antiseptic is required for administration due to the antibacterial action
CC   of the peptide.  Drugs made from these peptides can be rapidly
CC   metabolised.
XX
SQ   Sequence   3 AA;

  Query Match            100.0%;  Score 16;  DB 17;  Length 3;
  Best Local Similarity  100.0%;  Pred. No. 7.8e+05;
  Matches    2;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 RW 2
          ||
Db      1 RW 2


RESULT 10
AAW56234
ID   AAW56234 standard; peptide; 3 AA.
XX
AC   AAW56234;
XX
DT   20-JUL-1998  (first entry)
XX
DE   Anti-inflammatory tripeptide.
XX
KW   Anti-inflammatory; macrophage inhibitory activity; fibronectin;
KW   T-cell inhibitory activity; adherence; extracellular matrix;
KW   up-regulation; fas receptor expression; inflammation.
XX
OS   Synthetic.
XX
PN   WO9809985-A2.
XX
PD   12-MAR-1998.
XX
PF   03-SEP-1997;   97WO-IL00295.
XX
PR   28-MAY-1997;   97US-0864301.
PR   03-SEP-1996;   96US-0025376.
PR   20-NOV-1996;   96US-0753141.
XX
PA   (YEDA ) YEDA RES & DEV CO LTD.
XX
PI   Beserman P,  Eisenbachschwartz M,  Hirschberg DL;
XX
DR   WPI; 1998-193550/17.
XX
PT   Anti-inflammatory peptides and derivatives - used for treating, e.g.
PT   arthritis, ulcerative colitis, auto-immune disease, allergy asthma,
PT   shock, HIV infection, transplant rejection or Alzheimer's disease
XX
PS   Claim 7; Page 35; 42pp; English.
XX
CC   AAW56171-248 represent anti-inflammatory tripeptides of the invention.
CC   They are derived from the formulae:
CC   Xaa-Glu-Arg, Arg-Glu-Xaa, Xaa-Arg-Glu, or Glu-arg-Xaa, where
CC   Xaa = any amino acid residue.
CC   Cyclic derivatives of the peptides also function as anti-inflammatory
CC   agents. The peptides can be covalently linked to one another either
CC   directly or through a spacer. The peptides and their derivatives have
CC   macrophage inhibitory and T-cell inhibitory activity and thus,
CC   anti-inflammatory activity. The peptides and compositions have
CC   anti-immune activity, i.e. inhibitory effects against a cellular and
CC   humoral immune response, including a response not associated with
CC   inflammation. The peptides also inhibit the ability of macrophages and
CC   T-cells to adhere to extracellular matrix components and fibronectin, as
CC   well as up-regulated fas receptor expression in T-cells. They can be
CC   used to inhibit unwanted immune reaction and inflammation.
XX
SQ   Sequence   3 AA;

  Query Match            100.0%;  Score 16;  DB 19;  Length 3;
  Best Local Similarity  100.0%;  Pred. No. 7.8e+05;
  Matches    2;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 RW 2
          ||
Db      2 RW 3


RESULT 11
AAW52449
ID   AAW52449 standard; peptide; 3 AA.
XX
```

```
AC   AAW52449;
XX
DT   01-JUL-1998  (first entry)
XX
DE   Loop region used in cyclic peptide of the invention.
XX
KW   Loop region; cyclic peptide; antimicrobial; disinfectant; therapy;
KW   preservative; amphipathic anti-parallel beta-sheet region; plant disease.
XX
OS   Synthetic.
XX
PN   WO9803192-A1.
XX
PD   29-JAN-1998.
XX
PF   23-JUL-1997;   97WO-US12974.
XX
PR   24-JUL-1996;   96US-0685589.
XX
PA   (INTR-) INTRABIOTICS PHARM INC.
XX
PI   Chang C,  Chen J,  Gu L;
XX
DR   WPI; 1998-120472/11.
XX
PT   New cyclic peptide(s) with antimicrobial activity - contain
PT   amphipathic beta-sheet, loop and beta-turn regions, have better
PT   activity, bio:availability and protease resistance than linear
PT   analogues
XX
PS   Claim 4; Page 151; 160pp; English.
XX
CC   This sequence represents a loop region used in a peptide of the
CC   invention. The peptides are cyclic peptides (I), which have: (a) an
CC   amphipathic anti-parallel beta-sheet region (SR), a loop region (LR) and
CC   a beta-turn region (TR); (b) a net positive charge at physiological pH;
CC   and (c) at least one basic amino acid (aa) in LR or TR. (I) are broad
CC   spectrum antimicrobials, specifically for use against E. coli,
CC   Pseudomonas aeruginosa, methicillin-resistant Staphylococcus aureus
CC   (MRSA), vancomycin-resistant Enterococcus faecium and
CC   penicillin-resistant Streptococcus pneumoniae. More generally they are
CC   active against Gram-positive or -negative bacteria, fungi, yeast and
CC   protozoa. Apart from clinical uses, (I) are also used as disinfectants
CC   and preservatives for medical equipment, foods, cosmetics etc., also for
CC   treatment of plant diseases. Compared with non-cyclised analogues (i.e.
CC   tachyplesin and protegrin type peptides), (I) and are more effective,
CC   with better bioavailability and/or serum half-life (increased resistance
CC   to proteolysis). They are more suitable for oral administration, can be
CC   used at lower doses and are unlikely to induce development of resistant
CC   strains.
XX
SQ   Sequence   3 AA;

  Query Match             100.0%;  Score 16;  DB 19;  Length 3;
  Best Local Similarity   100.0%;  Pred. No. 7.8e+05;
  Matches    2;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 RW 2
          ||
Db      2 RW 3


RESULT 12
AAW41286
ID   AAW41286 standard; peptide; 3 AA.
XX
AC   AAW41286;
XX
DT   20-MAY-1998  (first entry)
XX
DE   Apoptosis inducer peptide.
XX
KW   Apoptosis inducer; hydrolysed lactoferrin.
XX
OS   Synthetic.
XX
PN   JP10045618-A.
XX
PD   17-FEB-1998.
XX
PF   26-JUL-1996;   96JP-0198196.
XX
PR   26-JUL-1996;   96JP-0198196.
XX
PA   (MORG ) MORINAGA MILK IND CO LTD.
XX
DR   WPI; 1998-189187/17.
XX
PT   New inducer(s) of apoptosis - comprise active parts of peptide(s)
PT   derived from hydrolysis of lactoferrin
XX
PS   Claim 3; Page 9; 11pp; Japanese.
XX
CC   This sequence represents an apoptosis inducer peptide of the invention.
CC   The apoptosis inducers comprising active parts of peptides derived from
CC   hydrolysed lactoferrin. The peptides can be used to prepare therapeutic
CC   compositions in the form of tablets, capsules or injections. The inducers
CC   are safe and do not cause adverse reactions.
XX
SQ   Sequence   3 AA;

  Query Match             100.0%;  Score 16;  DB 19;  Length 3;
  Best Local Similarity   100.0%;  Pred. No. 7.8e+05;
  Matches    2;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 RW 2
          ||
Db      1 RW 2


RESULT 13
AAR07102
ID   AAR07102 standard; protein; 4 AA.
XX
AC   AAR07102;
XX
DT   23-JAN-1991  (first entry)
XX
DE   Melanocyte-stimulating hormone inhibitor #7.
XX
KW   melanocyte-stimulating hormone (MSH) inhibitors; freckles;
KW   epidermal chloasmata; melanoma; whitening agent.
XX
OS   Synthetic.
XX
PN   EP389950-A.
XX
PD   03-OCT-1990.
XX
PF   21-MAR-1990;   90EP-0105354.
XX
PR   13-APR-1989;   89JP-0093643.
PR   23-MAR-1989;   89JP-0071215.
XX
PA   (LIOY ) LION CORP.
XX
PI   Takeuchi T,  Sato C,  Oba K,  Sugiyama K;
XX
DR   WPI; 1990-298939/40.
XX
PT   New peptide(s) - useful as melanocyte-stimulating hormone
PT   inhibitors, in the treatment of symptoms of chloasmata and
PT   freckles.
XX
PS   Claim 1; Page 21; 22pp; English.
XX
```

```
CC   This peptide comprises the essential amino acids for MSH inhibitory
CC   activity. Two other motifs have been identified and peptides
CC   containing any one of the 3 sequences can be used as MSH
CC   inhibitors. The peptides have an affinity for melanocyte receptors
CC   and antagonise MSH. They can be administered topically, orally or
CC   parenterally.
CC   See also AAR07096-R07101 and AAR07103-R07104.
XX
SQ   Sequence   4 AA;

  Query Match             100.0%;  Score 16;  DB 11;  Length 4;
  Best Local Similarity   100.0%;  Pred. No. 7.8e+05;
  Matches    2;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 RW 2
          ||
Db      3 RW 4


RESULT 14
AAR42570
ID   AAR42570 standard; peptide; 4 AA.
XX
AC   AAR42570;
XX
DT   22-JUN-1994  (first entry)
XX
DE   Peptide corresponding to pseudo-substrate region of zeta-PKC.
XX
KW   Zeta-protein kinase C inhibitor; zeta-PKC; pseudosubstrate; tumour;
KW   hyperproliferative disorders; psoriasis; viral infection; HIV.
XX
OS   Synthetic.
XX
PN   WO9320101-A.
XX
PD   14-OCT-1993.
XX
PF   02-APR-1993;   93WO-EP00816.
XX
PR   06-APR-1992;   92EP-0500034.
XX
PA   (GLAX ) GLAXO SA.
XX
PI   DIAZ-MECO CONDE MT,  MOSCAT GUILLEN J;
XX
DR   WPI; 1993-336831/42.
XX
PT   Peptide(s) corresp. to the pseudo-substrate region of zeta-PKC -
PT   used for treatment of tumours, hyper-proliferative disorders and
PT   viral infections
XX
PS   Claim 4; Page 43; 57pp; English.
XX
CC   The main claim refers to new peptides of formula X-Ala-Arg-Arg-J in
CC   which X is H or one or more amino acids and J is OH or one or more
CC   amino acids, the peptides containing a total of 3 to 15 amino acids.
CC   The present peptide is a specifically claimed example of these new
CC   peptides.
CC   The peptides are specific inhibitors of protein kinase C isotype
CC   zeta, i.e. any subspecies of PKC which contains the specific
CC   autoinhibitory pseudosubstrate domain RRGARRWRK (Acc. No. AAR42573).
CC   This domain has been found to be perfectly conserved in zeta-PKC
CC   variants isolated from a number of different sources, including rat
CC   brain. The peptides are usefully therapeutically for treating
CC   conditions where the underlying aetiology is associated with
CC   zeta-PKC, including tumours, hyperproliferative disorders (e.g.
CC   psoriasis) and viral infections (e.g. HIV).
XX
SQ   Sequence   4 AA;

  Query Match             100.0%;  Score 16;  DB 14;  Length 4;
  Best Local Similarity   100.0%;  Pred. No. 7.8e+05;
  Matches    2;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 RW 2
          ||
Db      3 RW 4


RESULT 15
AAR41642
ID   AAR41642 standard; peptide; 4 AA.
XX
AC   AAR41642;
XX
DT   10-MAR-1994  (first entry)
XX
DE   Internalisation signal #7.
XX
KW   Internalisation signal; core; modulation; receptor; transport; ligand;
KW   cytoplasmic tail; endocytosis.
XX
OS   Synthetic.
XX
PN   WO9318185-A.
XX
PD   16-SEP-1993.
XX
PF   01-MAR-1993;   93WO-US01669.
XX
PR   03-MAR-1992;   92US-0844852.
XX
PA   (SALK ) SALK INST BIOLOGICAL STUDIES.
PA   (SCRI ) SCRIPPS RES INST.
XX
PI   Collawn JF,  Kuhn LA,  Tainer JA,  Trowbridge IS;
XX
DR   WPI; 1993-303496/38.
XX
PT   Modulating receptor mediated transport of ligand into cell - by
PT   introducing heterologous internalisation signal into cell
XX
PS   Claim 16; Page 49; 60pp; English.
XX
CC   The sequences given in AAR41636-57 represent the cores of
CC   internalisation signals which were used in the method of the invention
CC   for modulating receptor mediated transport of a ligand into a cell.
CC   These sequences are derived from the cytoplasmic tails of surface
CC   receptors.  These amino acid internalisation signals have a tight turn
CC   structure.  The introduction of one of these sequences into a receptor
CC   within a cell, modulates the transport of ligand into a cell having a
CC   surface receptor reactive with that ligand.  This modulation can cause an
CC   increase or a decrease in endocytosis, depending on the choice of
CC   internalisation signal.
XX
SQ   Sequence   4 AA;

  Query Match             100.0%;  Score 16;  DB 14;  Length 4;
  Best Local Similarity   100.0%;  Pred. No. 7.8e+05;
  Matches    2;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 RW 2
          ||
Db      3 RW 4


RESULT 16
AAR48521
ID   AAR48521 standard; peptide; 4 AA.
XX
AC   AAR48521;
XX
DT   10-AUG-1994  (first entry)
XX
DE   Lactoferrin derived peptide #15.
```

XX
KW Decomposition; lactoferrin; digestion; enzyme; pepsin; trypsin;
KW antioxidant; oxidation; inhibitor; vitamin E; ascorbic acid;
KW vitamin A; beta-carotene; superoxidase dismutase; coenzyme Q;
KW lipid oxidation; foodstuff; drugs; health food; toiletries; cosmetics.
XX
OS Bos taurus.
XX
PN WO9403555-A.
XX
PD 17-FEB-1994.
XX
PF 04-AUG-1993; 93WO-JP01090.
XX
PR 07-AUG-1992; 92JP-0211335.
XX
PA (MORG) MORINAGA MILK IND CO LTD.
XX
PI Bellamy WR, Fukuwatari Y, Kawase K, Shimamura S;
PI Takase M, Tokiday, Tomita M, Wakabayashi H, Yamauchi K;
XX
DR WPI; 1994-065650/08.
XX
PT Antioxidant peptide lactoferrin decomposition product - prevents
PT oxidation of lipid(s) in foodstuffs and drugs without affecting
PT their taste
XX
PS Claim 3; Page 31; 47pp; Japanese.
XX
CC The sequences given in AAR48507-37 are peptides derived by the
CC decomposition of lactoferrin, pref. by digestion with an enzyme, eg.
CC pepsin or trypsin. These peptides may be used in an antioxidant
CC composition which may also contain an oxidation inhibitor such as
CC vitamin E, ascorbic acid, vitamin A, beta-carotene, superoxidase
CC dismutase or coenzyme Q. The antioxidant prevents lipid oxidation
CC in foodstuffs, drugs, health foods, toiletries and cosmetics.
XX
SQ Sequence 4 AA;

Query Match 100.0%; Score 16; DB 15; Length 4;
Best Local Similarity 100.0%; Pred. No. 7.8e+05;
Matches 2; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 RW 2
||
Db 2 RW 3

RESULT 17
AAR48526
ID AAR48526 standard; peptide; 4 AA.
XX
AC AAR48526;
XX
DT 10-AUG-1994 (first entry)
XX
DE Lactoferrin derived peptide #20.
XX
KW Decomposition; lactoferrin; digestion; enzyme; pepsin; trypsin;
KW antioxidant; oxidation; inhibitor; vitamin E; ascorbic acid;
KW vitamin A; beta-carotene; superoxidase dismutase; coenzyme Q;
KW lipid oxidation; foodstuff; drugs; health food; toiletries; cosmetics.
XX
OS Bos taurus.
XX
PN WO9403555-A.
XX
PD 17-FEB-1994.
XX
PF 04-AUG-1993; 93WO-JP01090.
XX
PR 07-AUG-1992; 92JP-0211335.
XX
PA (MORG) MORINAGA MILK IND CO LTD.
XX
PI Bellamy WR, Fukuwatari Y, Kawase K, Shimamura S;
PI Takase M, Tokiday, Tomita M, Wakabayashi H, Yamauchi K;
XX
DR WPI; 1994-065650/08.
XX
PT Antioxidant peptide lactoferrin decomposition product - prevents
PT oxidation of lipid(s) in foodstuffs and drugs without affecting
PT their taste
XX
PS Claim 3; Page 33; 47pp; Japanese.
XX
CC The sequences given in AAR48507-37 are peptides derived by the
CC decomposition of lactoferrin, pref. by digestion with an enzyme, eg.
CC pepsin or trypsin. These peptides may be used in an antioxidant
CC composition which may also contain an oxidation inhibitor such as
CC vitamin E, ascorbic acid, vitamin A, beta-carotene, superoxidase
CC dismutase or coenzyme Q. The antioxidant prevents lipid oxidation
CC in foodstuffs, drugs, health foods, toiletries and cosmetics.
XX
SQ Sequence 4 AA;

Query Match 100.0%; Score 16; DB 15; Length 4;
Best Local Similarity 100.0%; Pred. No. 7.8e+05;
Matches 2; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 RW 2
||
Db 2 RW 3

RESULT 18
AAR57452
ID AAR57452 standard; Protein; 4 AA.
XX
AC AAR57452;
XX
DT 28-FEB-1995 (first entry)
XX
DE Lactoferrin derived peptide #15.
XX
KW Lactoferrin; chemical; enzymatic; hydrolysis; antimicrobial;
KW antiseptic; ischaemic disease.
XX
OS Mus musculus.
XX
PN JP06172200-A.
XX
PD 21-JUN-1994.
XX
PF 08-DEC-1992; 92JP-0327738.
XX
PR 08-DEC-1992; 92JP-0327738.
XX
PA (MORG) MORINAGA MILK IND CO LTD.
XX
DR WPI; 1994-238662/29.
XX
PT Brain protectant for preventing ischaemic diseases without side
PT effects - comprising 31 specified peptide(s), prepd. by
PT lactoferrin hydrolysis
XX
PS Disclosure; Page 8; 11pp; Japanese.
XX
CC The sequences given in AAR57438-68 represent fragments of lactoferrin
CC which were derived from the full lenth protein by chemical or enzyme
CC hydrolysis. These peptides have brain protecting properties, as
CC well as anti-microbial activity. Compositions containing these
CC peptides may be prepared with out the addition of antiseptics, and
CC may be administered at doses of at least 10 mg for parenteral
CC administration and 100 mg for oral administration. These peptides
CC are stable, heat resistant, water soluble and may be used for the

```
CC   prevention of ischaemic diseases without side effects.
XX
SQ   Sequence   4 AA;

  Query Match             100.0%;  Score 16;  DB 15;  Length 4;
  Best Local Similarity   100.0%;  Pred. No. 7.8e+05;
  Matches    2;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 RW 2
          ||
Db      2 RW 3


RESULT 19
AAR57457
ID   AAR57457 standard; Protein; 4 AA.
XX
AC   AAR57457;
XX
DT   28-FEB-1995  (first entry)
XX
DE   Lactoferrin derived peptide #20.
XX
KW   Lactoferrin; chemical; enzymatic; hydrolysis; antimicrobial;
KW   antiseptic; ischaemic disease.
XX
OS   Mus musculus.
XX
PN   JP06172200-A.
XX
PD   21-JUN-1994.
XX
PF   08-DEC-1992;   92JP-0327738.
XX
PR   08-DEC-1992;   92JP-0327738.
XX
PA   (MORG ) MORINAGA MILK IND CO LTD.
XX
DR   WPI; 1994-238662/29.
XX
PT   Brain protectant for preventing ischaemic diseases without side
PT   effects - comprising 31 specified peptide(s), prepd. by
PT   lactoferrin hydrolysis
XX
PS   Disclosure; Page 9; 11pp; Japanese.
XX
CC   The sequences given in AAR57438-68 represent fragments of lactoferrin
CC   which were derived from the full lenth protein by chemical or enzyme
CC   hydrolysis.  These peptides have brain protecting properties, as
CC   well as anti-microbial activity.  Compositions containing these
CC   peptides may be prepared with out the addition of antiseptics, and
CC   may be administered at doses of at least 10 mg for parenteral
CC   administration and 100 mg for oral administration.  These peptides
CC   are stable, heat resistant, water soluble and may be used for the
CC   prevention of ischaemic diseases without side effects.
XX
SQ   Sequence   4 AA;

  Query Match             100.0%;  Score 16;  DB 15;  Length 4;
  Best Local Similarity   100.0%;  Pred. No. 7.8e+05;
  Matches    2;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 RW 2
          ||
Db      2 RW 3


RESULT 20
AAR57897
ID   AAR57897 standard; Protein; 4 AA.
XX
AC   AAR57897;
XX
DT   29-MAR-1995  (first entry)
XX
DE   Integrin binding site #1.
XX
KW   Binding site; CDR; complementarity determining region; immunoglobulin;
KW   heavy; light; primer extension; PCR; amplify; fibronectin; vitronectin;
KW   RGD-dependant; integrin ligand; von Willebrand factor; EBV; gp350/220;
KW   envelope gylcoprotein; HIV; gp120; reovirus; hemagglutinin; insulin;
KW   cellular receptor; CR2; CD4; hormone; thyroid stimulating hormone; TSH;
KW   transferrin; apolipoprotein; apo E; apo AI; MHC; class I; class II;
KW   non-RGD-dependent; vitronectin receptor; alpha-v, beta-3; modulation;
KW   anti-gpIIb/IIIa; monoclonal antibody; MAb; platelet adhesion; cancer;
KW   coagulation; inflammation; anti-vitronectin; tumour cell adhesion;
KW   migration.
XX
OS   Synthetic.
XX
PN   WO9418221-A.
XX
PD   18-AUG-1994.
XX
PF   02-FEB-1994;   94WO-US01258.
XX
PR   02-FEB-1993;   93US-0012566.
PR   28-JUN-1993;   93US-0084542.
XX
PA   (SCRI ) SCRIPPS RES INST.
XX
PI   Barbas CF,  Lerner RA;
XX
DR   WPI; 1994-279675/34.
XX
PT   Production of binding sites within CDR regions of immunoglobulins
PT   - displayed on the surface of filamentous phage particles, for
PT   inhibiting platelet aggregation and vitronectin binding
XX
PS   Example 5; Page 145; 207pp; English.
XX
CC   The sequences given in AAR57897-900 represents non-RGD integrin ligand
CC   binding sites.  These binding site peptides were was used in the method
CC   of the invention for producing a polypeptide having a binding site
CC   capable of binding a preselected agent.  Nucleotide sequences encoding
CC   these binding site peptides were introduced into a CDR region of a
CC   nucleic acid encoding an immunoglobulin heavy (H) or light (L) chain,
CC   by amplifying the CDR region by primer extension.  Preferred binding
CC   sites are derived from the RGD-dependant integrin ligands, eg.
CC   fibronectin, vitronectin, von Willebrand factor, from the envelope
CC   gylcoprotein from viruses such as HIV gp120, EBV gp350/220, reovirus
CC   hemagglutinin, from cellular receptors such as CR2 or CD4, from protein
CC   hormones such as thyroid stimulating hormone  (TSH), insulin,
CC   transferrin, from apolipoproteins such as apo E and apo AI, from
CC   immunoglobulin CDRs and from MHC class I or II proteins.  Non-RGD-
CC   dependent integrin binding sites were selected for the affinity to
CC   bind vitronectin receptor alpha-v, beta-3.  An anti-gpIIb/IIIa
CC   monoclonal antibody (MAb) produced in this way can be used to modulate
CC   platelet adhesion in the treatment of coagulation and some inflammatory
CC   responses.  An anti-vitronectin MAb can be used in the treatment of
CC   cancer by blocking tumour cell adhesion and migration.
XX
SQ   Sequence   4 AA;

  Query Match             100.0%;  Score 16;  DB 15;  Length 4;
  Best Local Similarity   100.0%;  Pred. No. 7.8e+05;
  Matches    2;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 RW 2
          ||
Db      1 RW 2


RESULT 21
AAR81695
ID   AAR81695 standard; peptide; 4 AA.
```

```
XX
AC   AAR81695;
XX
DT   06-JUL-1999  (first entry)
XX
DE   Analogue of alpha-MSH fragment, conjugated with thioctic acid.
XX
KW   Alpha-melanocyte stimulating hormone; MSH; thioctic acid; lipoic;
KW   antiallergic; antiinflammatory; cosmetic; skin tanning accelerator.
XX
OS   Synthetic.
XX
FH   Key             Location/Qualifiers
FT   Modified-site   1
FT                   /note= "The peptide is conjugated with lipoic acid
FT                    (i.e.thioctic acid) or with N-lipoyl-lysine"
FT   Modified-site   2
FT                   /note= "D-homo-Phe"
FT   Modified-site   4
FT                   /note= "Trp-NH2"
XX
PN   WO9508564-A1.
XX
PD   30-MAR-1995.
XX
PF   22-SEP-1994;   94WO-FR01108.
XX
PR   22-SEP-1993;   93FR-0011281.
XX
PA   (EUBI-) INST EURO BIOLOGIE CELLULAIRE.
XX
PI   Dussourd d'Hinterland L,  Pinel AM;
XX
DR   WPI; 1995-139550/18.
XX
PT   New lipoyl derivs. of melanocyte stimulating hormone fragments -
PT   useful as antiallergic, antiinflammatory and skin-tanning agents
XX
PS   Claim 5; Pages 33, 34; 42pp; French.
XX
CC   New peptide derivatives are disclosed which comprises a sequence of
CC   at least 4 amino acids from alpha-MSH (melanocyte stimulating hormone)
CC   linked to thioctic (lipoic) acid or a derivative of this acid. The
CC   amino acids are in natural or non-natural form and preferably include
CC   the sequence His-Phe-Arg in which the Phe residue is in the form of
CC   homoPhe or p-fluoroPhe. These compounds are useful for pharmaceutical
CC   purposes, especially as antiallergic and antiinflammatory agents, and
CC   for cosmetic purposes, e.g. as skin tanning accelerators.
XX
SQ   Sequence   4 AA;

  Query Match             100.0%;  Score 16;  DB 16;  Length 4;
  Best Local Similarity   100.0%;  Pred. No. 7.8e+05;
  Matches    2;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 RW 2
          ||
Db      3 RW 4


RESULT 22
AAR84694
ID   AAR84694 standard; peptide; 4 AA.
XX
AC   AAR84694;
XX
DT   13-JUN-1996  (first entry)
XX
DE   Bovine lactoferrin derived angina pectoris treating peptide.
XX
KW   Bovine lactoferrin; angina pectoris; treatment; low toxicity;
KW   no side effects; heat resistance; water solubility; stability;
KW   aqueous solution; preservative free.
XX
OS   Bos taurus.
XX
PN   JP07278011-A.
XX
PD   24-OCT-1995.
XX
PF   01-APR-1994;   94JP-0085243.
XX
PR   01-APR-1994;   94JP-0085243.
XX
PA   (MORG ) MORINAGA MILK IND CO LTD.
XX
DR   WPI; 1995-400916/51.
XX
PT   Peptide for treatment of angina pectoris - has low toxicity and is
PT   heat resistant and water soluble
XX
PS   Claim 1; Page 10; 12pp; Japanese.
XX
CC   The present peptide is a bovine lactoferrin derived, angina
CC   pectoris treatative agent. It has low toxicity and side effects,
CC   is heat resistant, water soluble and stable in an aq. soln.. It
CC   also requires no preservative.
XX
SQ   Sequence   4 AA;

  Query Match             100.0%;  Score 16;  DB 16;  Length 4;
  Best Local Similarity   100.0%;  Pred. No. 7.8e+05;
  Matches    2;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 RW 2
          ||
Db      2 RW 3


RESULT 23
AAR84689
ID   AAR84689 standard; peptide; 4 AA.
XX
AC   AAR84689;
XX
DT   13-JUN-1996  (first entry)
XX
DE   Bovine lactoferrin derived angina pectoris treating peptide.
XX
KW   Bovine lactoferrin; angina pectoris; treatment; low toxicity;
KW   no side effects; heat resistance; water solubility; stability;
KW   aqueous solution; preservative free.
XX
OS   Bos taurus.
XX
PN   JP07278011-A.
XX
PD   24-OCT-1995.
XX
PF   01-APR-1994;   94JP-0085243.
XX
PR   01-APR-1994;   94JP-0085243.
XX
PA   (MORG ) MORINAGA MILK IND CO LTD.
XX
DR   WPI; 1995-400916/51.
XX
PT   Peptide for treatment of angina pectoris - has low toxicity and is
PT   heat resistant and water soluble
XX
PS   Claim 1; Page 9; 12pp; Japanese.
XX
CC   The present peptide is a bovine lactoferrin derived, angina
CC   pectoris treatative agent. It has low toxicity and side effects,
CC   is heat resistant, water soluble and stable in an aq. soln.. It
CC   also requires no preservative.
```

```
XX
SQ   Sequence   4 AA;

  Query Match             100.0%;  Score 16;  DB 16;  Length 4;
  Best Local Similarity   100.0%;  Pred. No. 7.8e+05;
  Matches    2;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 RW 2
          ||
Db      2 RW 3


RESULT 24
AAR75601
ID   AAR75601 standard; peptide; 4 AA.
XX
AC   AAR75601;
XX
DT   06-MAR-1996  (first entry)
XX
DE   gp120 binding Fab VH CDR3 residues 96-99 #6.
XX
KW   Human; Fab; variable chain; heavy; light; region; VH; VL; HIV; gp120;
KW   3b1; 3b3; 3b4; 3b9; MT4; humanised; monoclonal antibody; MAb;
KW   immunoreaction; neutralisation; passive immunotherapy.
XX
OS   Synthetic.
XX
PN   WO9511317-A1.
XX
PD   27-APR-1995.
XX
PF   19-OCT-1994;   94WO-US11907.
XX
PR   19-SEP-1994;   94US-0308841.
PR   19-OCT-1993;   93US-0139409.
PR   26-APR-1994;   94US-0233619.
XX
PA   (SCRI ) SCRIPPS RES INST.
XX
PI   Barbas CF,  Burton DR,  Lerner RA;
XX
DR   WPI; 1995-170235/22.
XX
PT   Synthetic human neutralising monoclonal antibodies to human
PT   immunodeficiency virus - used for diagnosis and immuno:therapy of
PT   HIV-induced disease
XX
PS   Example 2; Fig 5; 249pp; English.
XX
CC   The sequences given in AAR75576-603 represent copmlementarity
CC   determining region 3 (CDR3) from various mutagenised human Fab's which
CC   comprise a variable chain heavy regions (VH), which bind to HIV gp120.
CC   The Fab's are based on the Fab MT4 and have the same amino acid
CC   composition as MT4 but have randomised amino acids in the entire CDR1 and
CC   in four of the 18 amino acid residues in CDR3 (see also AAR75575-94).
CC   These Fab's are used in the production of a human monoclonal antibody
CC   (MAb) which is capable of immunoreacting with, and neutralising HIV.  The
CC   MAb's are capable of reducing HIV infectivity titre in an in vitro virus
CC   infectivity assay by 50% at a concentration of <100 ng of antibody per
CC   ml.  They can be used to provide passive immunotherapy to HIV in a human.
CC    They neutralise HIV more effectively than antibodies selected from
CC   non-randomised combinatorial libraries.
XX
SQ   Sequence   4 AA;

  Query Match             100.0%;  Score 16;  DB 16;  Length 4;
  Best Local Similarity   100.0%;  Pred. No. 7.8e+05;
  Matches    2;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 RW 2
          ||
Db      3 RW 4


RESULT 25
AAR75603
ID   AAR75603 standard; peptide; 4 AA.
XX
AC   AAR75603;
XX
DT   06-MAR-1996  (first entry)
XX
DE   gp120 binding Fab VH CDR3 residues 96-99 #8.
XX
KW   Human; Fab; variable chain; heavy; light; region; VH; VL; HIV; gp120;
KW   3b1; 3b3; 3b4; 3b9; MT4; humanised; monoclonal antibody; MAb;
KW   immunoreaction; neutralisation; passive immunotherapy.
XX
OS   Synthetic.
XX
PN   WO9511317-A1.
XX
PD   27-APR-1995.
XX
PF   19-OCT-1994;   94WO-US11907.
XX
PR   19-SEP-1994;   94US-0308841.
PR   19-OCT-1993;   93US-0139409.
PR   26-APR-1994;   94US-0233619.
XX
PA   (SCRI ) SCRIPPS RES INST.
XX
PI   Barbas CF,  Burton DR,  Lerner RA;
XX
DR   WPI; 1995-170235/22.
XX
PT   Synthetic human neutralising monoclonal antibodies to human
PT   immunodeficiency virus - used for diagnosis and immuno:therapy of
PT   HIV-induced disease
XX
PS   Example 2; Fig 5; 249pp; English.
XX
CC   The sequences given in AAR75576-603 represent copmlementarity
CC   determining region 3 (CDR3) from various mutagenised human Fab's which
CC   comprise a variable chain heavy regions (VH), which bind to HIV gp120.
CC   The Fab's are based on the Fab MT4 and have the same amino acid
CC   composition as MT4 but have randomised amino acids in the entire CDR1 and
CC   in four of the 18 amino acid residues in CDR3 (see also AAR75575-94).
CC   These Fab's are used in the production of a human monoclonal antibody
CC   (MAb) which is capable of immunoreacting with, and neutralising HIV.  The
CC   MAb's are capable of reducing HIV infectivity titre in an in vitro virus
CC   infectivity assay by 50% at a concentration of <100 ng of antibody per
CC   ml.  They can be used to provide passive immunotherapy to HIV in a human.
CC    They neutralise HIV more effectively than antibodies selected from
CC   non-randomised combinatorial libraries.
XX
SQ   Sequence   4 AA;

  Query Match             100.0%;  Score 16;  DB 16;  Length 4;
  Best Local Similarity   100.0%;  Pred. No. 7.8e+05;
  Matches    2;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 RW 2
          ||
Db      3 RW 4


RESULT 26
AAR87663
ID   AAR87663 standard; peptide; 4 AA.
XX
AC   AAR87663;
XX
DT   15-FEB-1996  (first entry)
XX
```

```
DE   His-(D)Phe-Arg-(D)Trp or cyclo(His-(D)Phe-Arg-(D)Trp).
XX
KW   cytokine; interferon; interleukin; tumour necrosis factor; TNF;
KW   restraining; cyclic.
XX
OS   Synthetic.
XX
FH   Key             Location/Qualifiers
FT   Modified-site   1
FT                   /note= "this site is optionally alpha-N-acetylated;
FT                          alternatively, the C-terminal D-Trp may be
FT                          condensed onto this residue to give a
FT                          cyclic peptide"
FT   Misc-difference 2
FT                   /note= "D-form residue"
FT   Misc-difference 4
FT                   /note= "D-form residue; this residue is optionally
FT                          in amide form, or it may be condensed
FT                          onto the N-terminal His to form a cyclic
FT                          peptide"
XX
PN   WO9513086-A1.
XX
PD   18-MAY-1995.
XX
PF   09-NOV-1994;   94WO-US12897.
XX
PR   12-NOV-1993;   93US-0151534.
XX
PA   (HOUG-) HOUGHTEN PHARM INC.
XX
PI   Girten BE,  Houghten RA,  Loullis CC,  Suto MJ,  Tuttle RR;
XX
DR   WPI; 1995-193901/25.
XX
PT   Cytokine restraining peptides useful for treating inflammation,
PT   cachexia and patho-immunogenic disease - do not cause total
PT   immunosuppression and minimise damage to healthy tissue.
XX
PS   Claims 24, 27; Page 33; 41pp; English.
XX
CC   The patent discloses new cytokine restraining peptides and their amino-
CC   saccharide conjugates. The peptides contain a core sequence of
CC   His-(D)Phe-Arg-(D)Trp, and may be extended by up to 2 amino acids at
CC   the N-terminal and by 1 amino acid at the C-terminal. The N-terminal may
CC   be acetylated and the C-terminal can be in amide form; or the peptide
CC   can be cyclic, with the C-terminal condensing onto the N-terminal.
CC   The peptides can restrain activity due to elevated levels of
CC   interleukins, interferons and tumour necrosis factors and thus control
CC   immune and inflammatory responses. They are useful in the treatment of
CC   inflammation, pain, cachexia, arthritis, inflammatory bowel disease and
CC   systemic lupus erythematosus (SLE).
CC   The present sequence represents specific examples of the new peptides.
XX
SQ   Sequence   4 AA;

  Query Match             100.0%;  Score 16;  DB 16;  Length 4;
  Best Local Similarity   100.0%;  Pred. No. 7.8e+05;
  Matches    2;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 RW 2
          ||
Db      3 RW 4


RESULT 27
AAR87659
ID   AAR87659 standard; peptide; 4 AA.
XX
AC   AAR87659;
XX
DT   14-FEB-1996  (first entry)
XX
DE   His-(D)Phe-Arg-(D)Trp core peptide.
XX
KW   cytokine; interferon; interleukin; tumour necrosis factor; TNF;
KW   restraining.
XX
OS   Synthetic.
XX
FH   Key             Location/Qualifiers
FT   Misc-difference 2
FT                   /note= "D-form residue"
FT   Misc-difference 4
FT                   /note= "D-form residue"
XX
PN   WO9513086-A1.
XX
PD   18-MAY-1995.
XX
PF   09-NOV-1994;   94WO-US12897.
XX
PR   12-NOV-1993;   93US-0151534.
XX
PA   (HOUG-) HOUGHTEN PHARM INC.
XX
PI   Girten BE,  Houghten RA,  Loullis CC,  Suto MJ,  Tuttle RR;
XX
DR   WPI; 1995-193901/25.
XX
PT   Cytokine restraining peptides useful for treating inflammation,
PT   cachexia and patho-immunogenic disease - do not cause total
PT   immunosuppression and minimise damage to healthy tissue.
XX
PS   Claim 1; Page 29; 41pp; English.
XX
CC   The patent discloses new cytokine restraining peptides and their amino-
CC   saccharide conjugates. The peptides contain a core sequence of
CC   His-(D)Phe-Arg-(D)Trp, and may be extended by up to 2 amino acids at
CC   the N-terminal and by 1 amino acid at the C-terminal. The N-terminal may
CC   be acetylated and the C-terminal can be in amide form; or the peptide
CC   can be cyclic, with the C-terminal condensing onto the N-terminal.
CC   The peptides can restrain activity due to elevated levels of
CC   interleukins, interferons and tumour necrosis factors and thus control
CC   immune and inflammatory responses. They are useful in the treatment of
CC   inflammation, pain, cachexia, arthritis, inflammatory bowel disease and
CC   systemic lupus erythematosus (SLE).
CC   The present sequence represents the core sequence described above.
XX
SQ   Sequence   4 AA;

  Query Match             100.0%;  Score 16;  DB 16;  Length 4;
  Best Local Similarity   100.0%;  Pred. No. 7.8e+05;
  Matches    2;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 RW 2
          ||
Db      3 RW 4


RESULT 28
AAR79363
ID   AAR79363 standard; peptide; 4 AA.
XX
AC   AAR79363;
XX
DT   13-OCT-1995  (first entry)
XX
DE   Mutant thrombospondin Type-1 repeat sequence peptide F414W.
XX
KW   Thrombospondin type 1 repeat sequence; transforming growth factor-beta;
KW   wound healing; fibrosis; endothelial cell proliferation.
XX
OS   Synthetic.
XX
PN   WO9505191-A.
```

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XX
PD   23-FEB-1995.
XX
PF   12-AUG-1994;   94WO-US09193.
XX
PR   13-AUG-1993;   93US-0106120.
PR   04-MAY-1994;   94US-0238169.
XX
PA   (UABR-) UAB RES FOUND.
XX
PI   Krutzsch HC,  Murphy-Ullrich JE,  Roberts DD,  Schultz-Cherry S;
XX
DR   WPI; 1995-098579/13.
XX
PT   Stimulating or inhibiting transforming growth factor-beta by
PT   contacting with thrombo-spondin or an activating enzyme  - used
PT   to enhance wound healing or prevent fibrosis
XX
PS   Examples; Page 27; 67pp; English.
XX
CC   The peptides (AAR79357-63) are mutated consensus type 1 repeat sequence
CC   peptides (amino acids 412-473) of thrombospondin (sequence not given in
CC   the specification) which cannot stimulate the conversion of transforming
CC   growth factor-beta (TGF-b) from its latent to active form.  This peptide
CC   has a substitution of the Phe at pos. 414 for a Trp residue.  Other
CC   peptides (see AAR69766-90) contain this stimulatory or inhibitory
CC   activity. The inhibitory peptides (AAR69780-90) can be used to prevent
CC   fibrosis or block TGF-b mediated endothelial cell proliferation.
CC   Peptides (see AAR69766-79) which stimulate the conversion of latent TGF-b
CC   to active TGF-b can be used to enhance wound healing.
XX
SQ   Sequence   4 AA;

  Query Match             100.0%;  Score 16;  DB 16;  Length 4;
  Best Local Similarity   100.0%;  Pred. No. 7.8e+05;
  Matches    2;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 RW 2
          ||
Db      2 RW 3


RESULT 29
AAR79759
ID   AAR79759 standard; peptide; 4 AA.
XX
AC   AAR79759;
XX
DT   21-FEB-1996  (first entry)
XX
DE   Anti-parasitic lactoferrin hydrolysate derived peptide.
XX
KW   Anti-parasitic; lactoferrin; hydrolysate; non-toxic; aquatic animals;
KW   cultured fish; shellfish.
XX
OS   Homo sapiens.
XX
PN   JP07145069-A.
XX
PD   06-JUN-1995.
XX
PF   26-NOV-1993;   93JP-0296281.
XX
PR   26-NOV-1993;   93JP-0296281.
XX
PA   (MORG ) MORINAGA MILK IND CO LTD.
XX
DR   WPI; 1995-237144/31.
XX
PT   Drug containing lactoferrin or peptide(s) isolated from its
PT   hydrolysates - for prevention or therapy of parasitic diseases in
PT   aquatic animals esp. cultured fish and shellfish
XX
PS   Claim 3; Page 10; 14pp; Japanese.
XX
CC   AAR79746/60 and AAR80258/70 are non-toxic anti-parasitic peptides
CC   derived from lactoferrin hydrolysates. Alone, or in combination
CC   with lactoferrins and/or their hydrolysates, the peptides can be
CC   used to treat or prevent infectious diseases caused by parasites
CC   in aquatic animals, e.g. cultured fish and shellfish.
XX
SQ   Sequence   4 AA;

  Query Match             100.0%;  Score 16;  DB 16;  Length 4;
  Best Local Similarity   100.0%;  Pred. No. 7.8e+05;
  Matches    2;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 RW 2
          ||
Db      2 RW 3


RESULT 30
AAR80260
ID   AAR80260 standard; peptide; 4 AA.
XX
AC   AAR80260;
XX
DT   21-FEB-1996  (first entry)
XX
DE   Anti-parasitic lactoferrin hydrolysate derived peptide.
XX
KW   Anti-parasitic; lactoferrin; hydrolysate; non-toxic; aquatic animals;
KW   cultured fish; shellfish.
XX
OS   Homo sapiens.
XX
PN   JP07145069-A.
XX
PD   06-JUN-1995.
XX
PF   26-NOV-1993;   93JP-0296281.
XX
PR   26-NOV-1993;   93JP-0296281.
XX
PA   (MORG ) MORINAGA MILK IND CO LTD.
XX
DR   WPI; 1995-237144/31.
XX
PT   Drug containing lactoferrin or peptide(s) isolated from its
PT   hydrolysates - for prevention or therapy of parasitic diseases in
PT   aquatic animals esp. cultured fish and shellfish
XX
PS   Claim 3; Page 11; 14pp; Japanese.
XX
CC   AAR79746/60 and AAR80258/70 are non-toxic anti-parasitic peptides
CC   derived from lactoferrin hydrolysates. Alone, or in combination
CC   with lactoferrins and/or their hydrolysates, the peptides can be
CC   used to treat or prevent infectious diseases caused by parasites
CC   in aquatic animals, e.g. cultured fish and shellfish.
XX
SQ   Sequence   4 AA;

  Query Match             100.0%;  Score 16;  DB 16;  Length 4;
  Best Local Similarity   100.0%;  Pred. No. 7.8e+05;
  Matches    2;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 RW 2
          ||
Db      2 RW 3


RESULT 31
AAW77478
ID   AAW77478 standard; peptide; 4 AA.
XX
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AC   AAW77478;
XX
DT   06-JUL-1999  (first entry)
XX
DE   Tetrapeptide useful as zinc endopeptidase 24-15 inhibitor.
XX
KW   Zinc endopeptidase; EC.3.4.24-15; selective inhibitor; analgesic;
KW   pain; hypothermia; arterial hypertension; cancer; Alzheimer's disease;
KW   phosphinic acid; pseudopeptide linkage.
XX
OS   Synthetic.
XX
FH   Key             Location/Qualifiers
FT   Modified-site   1..2
FT                   /note= "Z-Phe-psi[PO2CH2]-Gly, where Z is benzyloxy-
FT                    carbonyl and -psi[PO2CH2]- indicates replacement of
FT                    the peptide linkage -CONH- between Phe and Gly by
FT                    the group -PO2CH2-"
XX
PN   EP725075-A1.
XX
PD   07-AUG-1996.
XX
PF   02-FEB-1996;   96EP-0400229.
XX
PR   06-FEB-1995;   95FR-0001328.
XX
PA   (COMS ) COMMISSARIAT ENERGIE ATOMIQUE.
XX
PI   Dive V,  Jiracek J,  Yiotakis A;
XX
DR   WPI; 1996-356059/36.
XX
PT   New peptide derivs. contg. phosphinic acid gp. replacing an amide
PT   bond  - are highly specific inhibitors of endo:peptidase 24-15, for
PT   treating hypothermia, hypertension, cancer, Alzheimer's disease etc.
XX
PS   Disclosure; Page 8; 18pp; French.
XX
CC   The sequence is a specific example of new peptide derivatives containing
CC   the sequence -Phe-psi[PO2CH2]-X-Y-Z'- in which Y = Arg or Lys; X and Z'=
CC   natural or pseudo-amino acids (preferably X is Gly, Ala or Leu and Z' is
CC   Met, Nle, Ala or Phe); and -psi[PO2CH2]- indicates replacement of the
CC   peptide linkage -CONH- between Phe and X by the group -PO2CH2-.
CC   These peptides are inhibitors of the zinc-dependent endopeptidase
CC   EC.3.4.24-15 and so prevent degradation of e.g. somatostatin, bradykinin,
CC   angiotensin, neurotensin, substance P, dynorphin etc. and may prevent
CC   maturation of ras oncoprotein. They are useful in treatment of pain,
CC   hypothermia, arterial hypertension, cancer and Alzheimer's disease.
CC   They are very selective for 24-15 with no significant action on other
CC   zinc endopeptidases such as 24-16, and are more stable, chemically, than
CC   phosphonamide peptide derivatives.
XX
SQ   Sequence   4 AA;

  Query Match             100.0%;  Score 16;  DB 17;  Length 4;
  Best Local Similarity   100.0%;  Pred. No. 7.8e+05;
  Matches    2;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1 RW 2
           ||
Db       3 RW 4


RESULT 32
AAW00268
ID   AAW00268 standard; peptide; 4 AA.
XX
AC   AAW00268;
XX
DT   30-APR-1997  (first entry)
XX
DE   Cytokine regulatory peptide #3.
XX
KW   Cytokine regulatory peptide; disuse deconditioning; IL-10;
KW   nitric oxide; adverse drug reaction; obesity; septic shock;
KW   cancer chemotherapy; organ transplant; cachexia; cyclosporin;
KW   adult respiratory distress syndrome; ARDS; autoimmune disease;
KW   allergic reaction; anaphylaxis; arthritis; inflammatory bowel disease;
KW   diabetes; glomerulonephritis; systemic lupus erythematosus;
KW   transplant; atherosclerosis; organ damage; immunosuppressant.
XX
OS   Synthetic.
XX
FH   Key             Location/Qualifiers
FT   Misc-difference 2
FT                   /note= "D-form residue"
FT   Misc-difference 4
FT                   /note= "D-form residue"
XX
PN   WO9627386-A1.
XX
PD   12-SEP-1996.
XX
PF   05-MAR-1996;   96WO-US03112.
XX
PR   12-SEP-1995;   95US-0527056.
PR   06-MAR-1995;   95US-0400983.
PR   07-JUN-1995;   95US-0484262.
XX
PA   (HOUG-) HOUGHTEN PHARM INC.
XX
PI   Andablibi A,  Basu A,  Fagan P,  Girten BE,  Houghten RA;
PI   Loullis CC,  Omholt P,  Suto MJ,  Tuttle RR,  Weber PA;
XX
DR   WPI; 1996-425217/42.
XX
PT   Cytokine regulatory agents modified at the amino or carboxy terminus
PT   - for controlling e.g. diabetes, obesity, septic shock, side
PT   effects of cancer therapy
XX
PS   Claim 14; Page 76; 90pp; English.
XX
CC   The sequences given in AAW00266-72 represent cytokine regulatory
CC   peptides which are modified at the amino or carboxy terminus.  These
CC   peptides are used to enhance or restrain cytokine activity and to treat
CC   e.g. disuse deconditioning, IL-10 activity diseases mediated by nitric
CC   oxide and cytokines, adverse drug reactions, obesity, septic shock and
CC   adverse side effects due to cancer chemotherapy or occurring as in
CC   response to organ transplantation, immune, inflammatory and healing
CC   process disorders, pain, cachexia, adult respiratory distress syndrome
CC   (ARDS), autoimmune diseases esp. allergic reactions or anaphylaxis,
CC   arthritis, inflammatory bowel disease, diabetes, glomerulonephritis,
CC   systemic lupus erythematosus, transplant, atherosclerosis and parasitic
CC   mediated immune dysfunctions such as charged disease, esp. organ damage
CC   caused by ischaemia reperfusion or immunosuppressant partic. cyclosporin.
CC    The peptides also act to increase the oxygen consumption of a subject.
XX
SQ   Sequence   4 AA;

  Query Match             100.0%;  Score 16;  DB 17;  Length 4;
  Best Local Similarity   100.0%;  Pred. No. 7.8e+05;
  Matches    2;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1 RW 2
           ||
Db       3 RW 4


RESULT 33
AAW00271
ID   AAW00271 standard; peptide; 4 AA.
XX
AC   AAW00271;
XX
DT   30-APR-1997  (first entry)
```

```
XX
DE   Cytokine regulatory peptide #6.
XX
KW   Cytokine regulatory peptide; disuse deconditioning; IL-10;
KW   nitric oxide; adverse drug reaction; obesity; septic shock;
KW   cancer chemotherapy; organ transplant; cachexia; cyclosporin;
KW   adult respiratory distress syndrome; ARDS; autoimmune disease;
KW   allergic reaction; anaphylaxis; arthritis; inflammatory bowel disease;
KW   diabetes; glomerulonephritis; systemic lupus erythematosus; cyclic;
KW   transplant; atherosclerosis; organ damage; immunosuppressant.
XX
OS   Synthetic.
XX
FH   Key             Location/Qualifiers
FT   Misc-difference 2
FT                   /note= "D-form residue"
FT   Modified-site   4
FT                   /note= "D-form residue"
XX
PN   WO9627386-A1.
XX
PD   12-SEP-1996.
XX
PF   05-MAR-1996;   96WO-US03112.
XX
PR   12-SEP-1995;   95US-0527056.
PR   06-MAR-1995;   95US-0400983.
PR   07-JUN-1995;   95US-0484262.
XX
PA   (HOUG-) HOUGHTEN PHARM INC.
XX
PI   Andablibi A,  Basu A,  Fagan P,  Girten BE,  Houghten RA;
PI   Loullis CC,  Omholt P,  Suto MJ,  Tuttle RR,  Weber PA;
XX
DR   WPI; 1996-425217/42.
XX
PT   Cytokine regulatory agents modified at the amino or carboxy terminus
PT   - for controlling e.g. diabetes, obesity, septic shock, side
PT   effects of cancer therapy
XX
PS   Claim 17; Page 76; 90pp; English.
XX
CC   The sequences given in AAW00266-72 represent cytokine regulatory
CC   peptides which are modified at the amino or carboxy terminus.  These
CC   peptides are used to enhance or restrain cytokine activity and to treat
CC   e.g. disuse deconditioning, IL-10 activity diseases mediated by nitric
CC   oxide and cytokines, adverse drug reactions, obesity, septic shock and
CC   adverse side effects due to cancer chemotherapy or occurring as in
CC   response to organ transplantation, immune, inflammatory and healing
CC   process disorders, pain, cachexia, adult respiratory distress syndrome
CC   (ARDS), autoimmune diseases esp. allergic reactions or anaphylaxis,
CC   arthritis, inflammatory bowel disease, diabetes, glomerulonephritis,
CC   systemic lupus erythematosus, transplant, atherosclerosis and parasitic
CC   mediated immune dysfunctions such as charged disease, esp. organ damage
CC   caused by ischaemia reperfusion or immunosuppressant partic. cyclosporin.
CC    The peptides also act to increase the oxygen consumption of a subject.
XX
SQ   Sequence   4 AA;

  Query Match             100.0%;  Score 16;  DB 17;  Length 4;
  Best Local Similarity   100.0%;  Pred. No. 7.8e+05;
  Matches    2;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1 RW 2
           ||
Db       3 RW 4


RESULT 34
AAR98545
ID   AAR98545 standard; Peptide; 4 AA.
XX
AC   AAR98545;
XX
DT   12-NOV-1996  (first entry)
XX
DE   Peptide for anti-ulcer agent.
XX
KW   anti-ulcer agent; low toxicity; stable; heat-resistant.
XX
OS   Synthetic.
XX
PN   JP08143468-A.
XX
PD   04-JUN-1996.
XX
PF   17-NOV-1994;   94JP-0283869.
XX
PR   17-NOV-1994;   94JP-0283869.
XX
PA   (MORG ) MORINAGA MILK IND CO LTD.
XX
DR   WPI; 1996-318857/32.
XX
PT   Anti-ulcer agent contg. peptide - has low toxicity, is
PT   heat-resistant and water-soluble
XX
PS   Claim 1; Page 9; 11pp; Japanese.
XX
CC   AAR98531-54 are peptides used in an anti-ulcer agent.  The agent is low
CC   in toxicity, is heat-resistant and stable in aqueous soln..  It can be
CC   administered orally and be produced in large amounts.
XX
SQ   Sequence   4 AA;

  Query Match             100.0%;  Score 16;  DB 17;  Length 4;
  Best Local Similarity   100.0%;  Pred. No. 7.8e+05;
  Matches    2;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1 RW 2
           ||
Db       2 RW 3


RESULT 35
AAR98550
ID   AAR98550 standard; Peptide; 4 AA.
XX
AC   AAR98550;
XX
DT   12-NOV-1996  (first entry)
XX
DE   Peptide for anti-ulcer agent.
XX
KW   anti-ulcer agent; low toxicity; stable; heat-resistant.
XX
OS   Synthetic.
XX
PN   JP08143468-A.
XX
PD   04-JUN-1996.
XX
PF   17-NOV-1994;   94JP-0283869.
XX
PR   17-NOV-1994;   94JP-0283869.
XX
PA   (MORG ) MORINAGA MILK IND CO LTD.
XX
DR   WPI; 1996-318857/32.
XX
PT   Anti-ulcer agent contg. peptide - has low toxicity, is
PT   heat-resistant and water-soluble
XX
PS   Claim 1; Page 10; 11pp; Japanese.
XX
CC   AAR98531-54 are peptides used in an anti-ulcer agent.  The agent is low
```

```
CC   in toxicity, is heat-resistant and stable in aqueous soln..  It can be
CC   administered orally and be produced in large amounts.
XX
SQ   Sequence   4 AA;

  Query Match             100.0%;  Score 16;  DB 17;  Length 4;
  Best Local Similarity   100.0%;  Pred. No. 7.8e+05;
  Matches    2;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 RW 2
          ||
Db      2 RW 3


RESULT 36
AAR91850
ID   AAR91850 standard; peptide; 4 AA.
XX
AC   AAR91850;
XX
DT   20-SEP-1996  (first entry)
XX
DE   Lactoferrin-derived specific peptide 20, useful for wound healing.
XX
KW   Bovine lactoferrin; wound healing; skin damage; burn; bedsore.
XX
OS   Synthetic.
XX
PN   JP08081387-A.
XX
PD   26-MAR-1996.
XX
PF   09-SEP-1994;   94JP-0241894.
XX
PR   09-SEP-1994;   94JP-0241894.
XX
PA   (MORG ) MORINAGA MILK IND CO LTD.
XX
DR   WPI; 1996-217187/22.
XX
PT   Wound healing agent comprising specific peptide(s) - is heat
PT   resistant, stable in aqueous solution and suitable for oral,
PT   external or subcutaneous admin.
XX
PS   Claim 1; Page 10; 12pp; Japanese.
XX
CC   The present peptide is useful in a novel wound healing agent. The
CC   agent is thermostable and stable in aqueous solution. It is
CC   administered externally, orally or subcutaneously for treatment of
CC   skin damage such as burns or bedsores.
XX
SQ   Sequence   4 AA;

  Query Match             100.0%;  Score 16;  DB 17;  Length 4;
  Best Local Similarity   100.0%;  Pred. No. 7.8e+05;
  Matches    2;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 RW 2
          ||
Db      2 RW 3


RESULT 37
AAR91846
ID   AAR91846 standard; peptide; 4 AA.
XX
AC   AAR91846;
XX
DT   20-SEP-1996  (first entry)
XX
DE   Lactoferrin-derived specific peptide 15, useful for wound healing.
XX
KW   Bovine lactoferrin; wound healing; skin damage; burn; bedsore.
XX
OS   Synthetic.
XX
PN   JP08081387-A.
XX
PD   26-MAR-1996.
XX
PF   09-SEP-1994;   94JP-0241894.
XX
PR   09-SEP-1994;   94JP-0241894.
XX
PA   (MORG ) MORINAGA MILK IND CO LTD.
XX
DR   WPI; 1996-217187/22.
XX
PT   Wound healing agent comprising specific peptide(s) - is heat
PT   resistant, stable in aqueous solution and suitable for oral,
PT   external or subcutaneous admin.
XX
PS   Claim 1; Page 9; 12pp; Japanese.
XX
CC   The present peptide is useful in a novel wound healing agent. The
CC   agent is thermostable and stable in aqueous solution. It is
CC   administered externally, orally or subcutaneously for treatment of
CC   skin damage such as burns or bedsores.
XX
SQ   Sequence   4 AA;

  Query Match             100.0%;  Score 16;  DB 17;  Length 4;
  Best Local Similarity   100.0%;  Pred. No. 7.8e+05;
  Matches    2;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 RW 2
          ||
Db      2 RW 3


RESULT 38
AAR90599
ID   AAR90599 standard; peptide; 4 AA.
XX
AC   AAR90599;
XX
DT   09-JUL-1996  (first entry)
XX
DE   Lactoferrin derived peptide #15.
XX
KW   Lactoferrin; antitumour; therapy; tumour; parenteral administration;
KW   thermostable; cytotoxic; antibacterial.
XX
OS   Synthetic.
XX
PN   JP07309771-A.
XX
PD   28-NOV-1995.
XX
PF   17-MAY-1994;   94JP-0103109.
XX
PR   17-MAY-1994;   94JP-0103109.
XX
PA   (MORG ) MORINAGA MILK IND CO LTD.
XX
DR   WPI; 1996-045317/05.
XX
PT   Antitumour agent, derived from lactoferrin, for parenteral
PT   administration - has few side effects and is thermally stable and
PT   water soluble
XX
PS   Claim 1; Page 7; 10pp; Japanese.
XX
CC   AAR90585-R90613 represent lactoferrin derived peptides.  These sequences
CC   can be used as antitumour agents for parenteral administration.  The
CC   sequences are thermally stable, water soluble and stable in water.
```

```
CC   These peptide sequences are only cytotoxic to tumour cells.
CC   Administration of these sequences results in few side effects.  No
CC   antiseptic is required for administration due to the antibacterial action
CC   of the peptide.  Drugs made from these peptides can be rapidly
CC   metabolised.
XX
SQ   Sequence   4 AA;

  Query Match             100.0%;  Score 16;  DB 17;  Length 4;
  Best Local Similarity   100.0%;  Pred. No. 7.8e+05;
  Matches    2;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 RW 2
          ||
Db      2 RW 3


RESULT 39
AAR90604
ID   AAR90604 standard; peptide; 4 AA.
XX
AC   AAR90604;
XX
DT   09-JUL-1996  (first entry)
XX
DE   Lactoferrin derived peptide #20.
XX
KW   Lactoferrin; antitumour; therapy; tumour; parenteral administration;
KW   thermostable; cytotoxic; antibacterial.
XX
OS   Synthetic.
XX
PN   JP07309771-A.
XX
PD   28-NOV-1995.
XX
PF   17-MAY-1994;   94JP-0103109.
XX
PR   17-MAY-1994;   94JP-0103109.
XX
PA   (MORG ) MORINAGA MILK IND CO LTD.
XX
DR   WPI; 1996-045317/05.
XX
PT   Antitumour agent, derived from lactoferrin, for parenteral
PT   administration - has few side effects and is thermally stable and
PT   water soluble
XX
PS   Claim 1; Page 8; 10pp; Japanese.
XX
CC   AAR90585-R90613 represent lactoferrin derived peptides.  These sequences
CC   can be used as antitumour agents for parenteral administration.  The
CC   sequences are thermally stable, water soluble and stable in water.
CC   These peptide sequences are only cytotoxic to tumour cells.
CC   Administration of these sequences results in few side effects.  No
CC   antiseptic is required for administration due to the antibacterial action
CC   of the peptide.  Drugs made from these peptides can be rapidly
CC   metabolised.
XX
SQ   Sequence   4 AA;

  Query Match             100.0%;  Score 16;  DB 17;  Length 4;
  Best Local Similarity   100.0%;  Pred. No. 7.8e+05;
  Matches    2;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 RW 2
          ||
Db      2 RW 3


RESULT 40
AAR87613
ID   AAR87613 standard; peptide; 4 AA.
XX
AC   AAR87613;
XX
DT   11-JUL-1996  (first entry)
XX
DE   Lactoferrin-derived anti-fungal peptide.
XX
KW   Anti-fungal; water soluble; lactoferrin; stable; anti-bacterial;
KW   rapidly metabolised.
XX
OS   Synthetic.
XX
PN   JP07309774-A.
XX
PD   28-NOV-1995.
XX
PF   17-MAY-1994;   94JP-0126882.
XX
PR   17-MAY-1994;   94JP-0126882.
XX
PA   (MORG ) MORINAGA MILK IND CO LTD.
XX
DR   WPI; 1996-045320/05.
XX
PT   Water-soluble anti-fungus agent derived from lactoferrin - has
PT   antibacterial action and is not cytotoxic to animal cells
XX
PS   Claim 1; Page 8; 11pp; Japanese.
XX
CC   AAR87599-R87627 are the active ingredients of an anti-fungal agent.
CC   The agent has anti-bacterial as well as anti-fungal properties but is
CC   only cytotoxic to fungal cells. The agent is water-soluble, hence
CC   drugs made from the agent are rapidly metabolised. The peptides are
CC   derived from fragmented lactoferrin.
XX
SQ   Sequence   4 AA;

  Query Match             100.0%;  Score 16;  DB 17;  Length 4;
  Best Local Similarity   100.0%;  Pred. No. 7.8e+05;
  Matches    2;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 RW 2
          ||
Db      2 RW 3


RESULT 41
AAR87618
ID   AAR87618 standard; peptide; 4 AA.
XX
AC   AAR87618;
XX
DT   11-JUL-1996  (first entry)
XX
DE   Lactoferrin-derived anti-fungal peptide.
XX
KW   Anti-fungal; water soluble; lactoferrin; stable; anti-bacterial;
KW   rapidly metabolised.
XX
OS   Synthetic.
XX
PN   JP07309774-A.
XX
PD   28-NOV-1995.
XX
PF   17-MAY-1994;   94JP-0126882.
XX
PR   17-MAY-1994;   94JP-0126882.
XX
PA   (MORG ) MORINAGA MILK IND CO LTD.
XX
DR   WPI; 1996-045320/05.
XX
```

```
PT   Water-soluble anti-fungus agent derived from lactoferrin - has
PT   antibacterial action and is not cytotoxic to animal cells
XX
PS   Claim 1; Page 8; 11pp; Japanese.
XX
CC   AAR87599-R87627 are the active ingredients of an anti-fungal agent.
CC   The agent has anti-bacterial as well as anti-fungal properties but is
CC   only cytotoxic to fungal cells. The agent is water-soluble, hence
CC   drugs made from the agent are rapidly metabolised. The peptides are
CC   derived from fragmented lactoferrin.
XX
SQ   Sequence   4 AA;

  Query Match            100.0%;  Score 16;  DB 17;  Length 4;
  Best Local Similarity   100.0%;  Pred. No. 7.8e+05;
  Matches    2;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 RW 2
          ||
Db      2 RW 3


RESULT 42
AAW45420
ID   AAW45420 standard; peptide; 4 AA.
XX
AC   AAW45420;
XX
DT   14-MAY-1998  (first entry)
XX
DE   Cytokine regulatory agent #1.
XX
KW   Cytokine regulatory agent; oral administration; ion exchange resin;
KW   degradation.
XX
OS   Synthetic.
XX
FH   Key             Location/Qualifiers
FT   Modified-site   1
FT                   /note= "Optional N-terminal acetyl"
FT   Misc-difference 2
FT                   /note= "D-form residue"
FT   Misc-difference 4
FT                   /note= "D-form residue, optional C-terminal amide"
XX
PN   WO9722356-A1.
XX
PD   26-JUN-1997.
XX
PF   18-DEC-1996;   96WO-US20378.
XX
PR   19-DEC-1995;   95US-0574556.
XX
PA   (HOUG-) HOUGHTEN PHARM INC.
XX
PI   Maniar M,  Mauch S;
XX
DR   WPI; 1997-341431/31.
XX
PT   Complex of ion exchange resin with bio:polymer drug - especially
PT   cytokine regulatory peptide, protecting drug against enzymatic
PT   degradation on oral administration
XX
PS   Disclosure; Page 12; 36pp; English.
XX
CC   This sequence represents a cytokine regulatory agent peptide. The
CC   invention relates to a novel composition which comprises an ion exchange
CC   resin and a therapeutically effective biopolymer in a form for oral
CC   administration. This invention provides a method of protecting a
CC   therapeutically active bioactive polymer from degradation. These
CC   compounds are useful for oral administration of drugs e.g. of a nucleic
CC   acid to the small or large intestine to modulate the expression of
CC   cellular gene products or treatment of colon cancer or especially for
CC   administration of a cytokine regulatory agent (CRA) peptide to control
CC   aberrant cytokine activity, as occurs in pathological conditions such as
CC   immune and inflammatory responses. The release characteristics of the
CC   biopolymer from the compound in the small or large intestine can be
CC   controlled by selection of the ion exchange resin and optional use of
CC   coatings.
XX
SQ   Sequence   4 AA;

  Query Match            100.0%;  Score 16;  DB 18;  Length 4;
  Best Local Similarity   100.0%;  Pred. No. 7.8e+05;
  Matches    2;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 RW 2
          ||
Db      3 RW 4


RESULT 43
AAW30863
ID   AAW30863 standard; peptide; 4 AA.
XX
AC   AAW30863;
XX
DT   08-APR-1998  (first entry)
XX
DE   Analgesic N-terminal substituted tetrapeptide #8.
XX
KW   Analgesic agent; high potency; trityl; tetrapeptide.
XX
OS   Synthetic.
XX
FH   Key             Location/Qualifiers
FT   Modified-site   1
FT                   /note= "Trityl-Asn"
FT   Modified-site   4
FT                   /note= "C-terminal amide"
XX
PN   WO9733907-A1.
XX
PD   18-SEP-1997.
XX
PF   10-MAR-1997;   97WO-JP00751.
XX
PR   11-MAR-1996;   96JP-0053353.
XX
PA   (SAKA ) OTSUKA PHARM CO LTD.
XX
PI   Adachi M,  Aimoto S,  Kanemoto N,  Kuwahara M,  Muneoka Y;
PI   Ogino K;
XX
DR   WPI; 1997-479891/44.
XX
PT   Analgesic N-terminal substituted tri- and tetrapeptide(s) - where
PT   the N-terminal substituent contains one or more benzene ring and is
PT   preferably trityl
XX
PS   Example 1; Page 25; 122pp; English.
XX
CC   The present sequence represents a specific example of a tetrapeptide
CC   derivative which is useful as an analgesic agent with high potency.
CC   The tetrapeptides have the formula; X1(R)-X2-X3-X4-A; where X1 = Asn,
CC   Gln, His, Ser, Thr or Cys; R = a functional group containing a benzene
CC   ring, such as trityl (preferred), diphenylmethyl, tris(p-hydroxyphenyl)-
CC   methyl or benzyl; X2 = Gln, Met, Leu, Arg, His, Gly, Thr or Cys; X3 =
CC   any genetically encodable amino acid; X4 = a direct bond or any
CC   genetically encodable amino acid; A =  C-terminal OH or NH2 or a
CC   substituted group derived from them, such as NHNH2, NHNHCOC2H5,
CC   NHCH2CH2N(O)(CH3)2, NH(CH2)3S(O)CH3, NH(CH2)8NH2 or NH(CH2)7CONH2.
XX
SQ   Sequence   4 AA;

  Query Match            100.0%;  Score 16;  DB 18;  Length 4;
```

```
  Best Local Similarity   100.0%;  Pred. No. 7.8e+05;
  Matches    2;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 RW 2
          ||
Db      3 RW 4


RESULT 44
AAW30473
ID   AAW30473 standard; peptide; 4 AA.
XX
AC   AAW30473;
XX
DT   06-FEB-1998  (first entry)
XX
DE   Cytokine regulatory agent #3.
XX
KW   Cytokine regulatory agent; CRA; cytokine restraining agents; GI damage;
KW   gastro-intestinal damage; non-steroidal anti-inflammatory drug; therapy;
KW   NSAID; indomethacin; chronic disease; hereditary disease; cyclic;
KW   Crohn's disease; ulcerative colitis.
XX
OS   Synthetic.
XX
FH   Key             Location/Qualifiers
FT   Misc-difference 1..4
FT                   /note= "optionally form cyclic peptide"
FT   Misc-difference 2
FT                   /note= "D-form residue"
FT   Misc-difference 4
FT                   /note= "D-form residue"
XX
PN   WO9709995-A1.
XX
PD   20-MAR-1997.
XX
PF   12-SEP-1996;   96WO-US14744.
XX
PR   12-SEP-1995;   95US-0527252.
XX
PA   (HOUG-) HOUGHTEN PHARM INC.
XX
PI   Girten BE,  Omholt P,  Tuttle RR;
XX
DR   WPI; 1997-202003/18.
XX
PT   Reducing severity of gastro-intestinal damage - by administration of
PT   cytokine regulatory agent
XX
PS   Claim 22; Page 19; 22pp; English.
XX
CC   AAW30470-W30474 represent cytokine regulatory elements (CRAs) used in
CC   the method of the invention. CRAs were previously known as cytokine
CC   restraining agents. The method of the invention is for reducing the
CC   severity of gastro-intestinal (GI) damage in an individual susceptible
CC   for developing such damage. The method comprises administering to the
CC   individual an effective dose of a CRA of formula
CC   X1-X2-His-(D)Phe-Arg-(D)Trp-X3 (I) or X4-X5-(D)Phe-Arg-(D)Trp-X3' (II),
CC   in which X1= a group of formula R2R1N-CHR3-C(Y1)(Y2)- (i), H or COCH3;
CC   X2= a group of formula -NR1-CHR4-C(Y1)(Y2)- (ii); X3 = R5 or a group of
CC   formula -NR1-CHR6-(CH2)n-C(Y1)(Y2)-R5 (iii); X4 = H, COCH3, or group of
CC   formula R1R2N-CHR4-C(Y1)(Y2)- (iv), or is absent; X5 = His, H or COCH3;
CC   X3' = NH2, OH or a group (iii); Y1, Y2 = H or together form a carbonyl
CC   or thiocarbonyl; R1= H, COCH3, C2H5, CH2Ph, COPh, COOCH2Ph, COO-t-butyl,
CC   CH2CO-(polyethylene glycol) or A; R2 = H or COCH3; R3 = 1-6C linear or
CC   branched alkyl, or 3-6C cyclic alkyl; R4 = (CH2)mCONH2, (CH2)m-CONHR1 or
CC   (CH2)m-CONHA; R5 = OH, OR3, NH2, SH, NHCH3, NHCH2Ph or A; R6 = H or R3;
CC   Ph = C6H5; m = 1-3; n = 0-3; and A = a carbohydrate. The method can be
CC   used to reduce the severity of GI damage induced by a non-steroidal
CC   anti-inflammatory drug (NSAID), e.g. indomethacin. The GI damage treated
CC   with these sequences can also occur as a result of chronic or hereditary
CC   diseases such as ulcerative colitis, or Crohn's disease.
XX
SQ   Sequence   4 AA;

  Query Match             100.0%;  Score 16;  DB 18;  Length 4;
  Best Local Similarity   100.0%;  Pred. No. 7.8e+05;
  Matches    2;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 RW 2
          ||
Db      3 RW 4


RESULT 45
AAW26144
ID   AAW26144 standard; peptide; 4 AA.
XX
AC   AAW26144;
XX
DT   24-NOV-1997  (first entry)
XX
DE   Lactoferrin derivative #13.
XX
KW   Lactoferrin; lactoferrin hydrolysate; derivative; neovascular disease;
KW   ophthalmic disease; chronic rheumatism; abnormal capillary vessel;
KW   psoriasis; therapy.
XX
OS   Synthetic.
XX
PN   JP09194388-A.
XX
PD   29-JUL-1997.
XX
PF   22-JAN-1996;   96JP-0008722.
XX
PR   22-JAN-1996;   96JP-0008722.
XX
PA   (MORG ) MORINAGA MILK IND CO LTD.
XX
DR   WPI; 1997-431405/40.
XX
PT   Peptide derived from lactoferrin or lactoferrin hydrolysate - for
PT   treatment of neovascular diseases
XX
PS   Claim 3; Page 8; 11pp; Japanese.
XX
CC   AAW26132-W26157 represent the peptide derivatives of the invention.
CC   These sequences are derivatives of lactoferrin or lactoferrin
CC   hydrolysate. The derivatives are used in an agent for the treatment of
CC   neovascular diseases. The diseases that the peptides can be used to treat
CC   include ophthalmic diseases, chronic rheumatism, psoriasis and abnormal
CC   capillary vessels.
XX
SQ   Sequence   4 AA;

  Query Match             100.0%;  Score 16;  DB 18;  Length 4;
  Best Local Similarity   100.0%;  Pred. No. 7.8e+05;
  Matches    2;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 RW 2
          ||
Db      2 RW 3


RESULT 46
AAW26148
ID   AAW26148 standard; peptide; 4 AA.
XX
AC   AAW26148;
XX
DT   24-NOV-1997  (first entry)
XX
DE   Lactoferrin derivative #17.
XX
```

```
KW   Lactoferrin; lactoferrin hydrolysate; derivative; neovascular disease;
KW   ophthalmic disease; chronic rheumatism; abnormal capillary vessel;
KW   psoriasis; therapy.
XX
OS   Synthetic.
XX
PN   JP09194388-A.
XX
PD   29-JUL-1997.
XX
PF   22-JAN-1996;   96JP-0008722.
XX
PR   22-JAN-1996;   96JP-0008722.
XX
PA   (MORG ) MORINAGA MILK IND CO LTD.
XX
DR   WPI; 1997-431405/40.
XX
PT   Peptide derived from lactoferrin or lactoferrin hydrolysate - for
PT   treatment of neovascular diseases
XX
PS   Claim 3; Page 8; 11pp; Japanese.
XX
CC   AAW26132-W26157 represent the peptide derivatives of the invention.
CC   These sequences are derivatives of lactoferrin or lactoferrin
CC   hydrolysate. The derivatives are used in an agent for the treatment of
CC   neovascular diseases. The diseases that the peptides can be used to treat
CC   include ophthalmic diseases, chronic rheumatism, psoriasis and abnormal
CC   capillary vessels.
XX
SQ   Sequence   4 AA;

  Query Match             100.0%;  Score 16;  DB 18;  Length 4;
  Best Local Similarity   100.0%;  Pred. No. 7.8e+05;
  Matches    2;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 RW 2
          ||
Db      2 RW 3


RESULT 47
AAW14030
ID   AAW14030 standard; peptide; 4 AA.
XX
AC   AAW14030;
XX
DT   27-MAY-1997  (first entry)
XX
DE   Anti-parasitic peptide #14.
XX
KW   Anti-parasitic; cytotoxic.
XX
OS   Synthetic.
XX
PN   JP09040578-A.
XX
PD   10-FEB-1997.
XX
PF   31-JUL-1995;   95JP-0195218.
XX
PR   31-JUL-1995;   95JP-0195218.
XX
PA   (MORG ) MORINAGA MILK IND CO LTD.
XX
DR   WPI; 1997-175617/16.
XX
PT   Anti-parasite agent - shows no cytotoxicity to normal cells
XX
PS   Claim 1; Page 8; 11pp; Japanese.
XX
CC   AAW14017-W14044 represent peptide sequence used in the anti-parasitic
CC   agent of the invention.  The anti-parasitic agent contains one of these
CC   sequences, or a mixture of at least two of them (or derivatives, or
CC   salts of these sequences) as the active component.  The agent is an
CC   anti-parasitic and has low side effects and shows no cytotoxicity to
CC   normal cells.  The agent is also stable in aqueous solution.
XX
SQ   Sequence   4 AA;

  Query Match             100.0%;  Score 16;  DB 18;  Length 4;
  Best Local Similarity   100.0%;  Pred. No. 7.8e+05;
  Matches    2;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 RW 2
          ||
Db      2 RW 3


RESULT 48
AAW14034
ID   AAW14034 standard; peptide; 4 AA.
XX
AC   AAW14034;
XX
DT   27-MAY-1997  (first entry)
XX
DE   Anti-parasitic peptide #18.
XX
KW   Anti-parasitic agent; cytotoxic; parasite.
XX
OS   Synthetic.
XX
PN   JP09040578-A.
XX
PD   10-FEB-1997.
XX
PF   31-JUL-1995;   95JP-0195218.
XX
PR   31-JUL-1995;   95JP-0195218.
XX
PA   (MORG ) MORINAGA MILK IND CO LTD.
XX
DR   WPI; 1997-175617/16.
XX
PT   Anti-parasite agent - shows no cytotoxicity to normal cells
XX
PS   Claim 1; Page 8; 11pp; Japanese.
XX
CC   AAW14017-W14044 represent peptide sequence used in the anti-parasitic
CC   agent of the invention.  The anti-parasitic agent contains one of these
CC   sequences, or a mixture of at least two of them (or derivatives, or
CC   salts of these sequences) as the active component.  The agent is an
CC   anti-parasitic and has low side effects and shows no cytotoxicity to
CC   normal cells.  The agent is also stable in aqueous solution.
XX
SQ   Sequence   4 AA;

  Query Match             100.0%;  Score 16;  DB 18;  Length 4;
  Best Local Similarity   100.0%;  Pred. No. 7.8e+05;
  Matches    2;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 RW 2
          ||
Db      2 RW 3


RESULT 49
AAY21340
ID   AAY21340 standard; Protein; 4 AA.
XX
AC   AAY21340;
XX
DT   22-JUL-1999  (first entry)
XX
DE   Human semaphorin III mutant protein fragment 73.
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XX
KW   Human; beta-amyloid precursor protein; beta-APP; diagnosis; cancer;
KW   frameshift mutation; age-related disease; neurodegenerative disorder;
KW   Alzheimer's disease; Down's syndrome; myotonic dystrophy; neuronal;
KW   Huntington's disease; multiple sclerosis; alcoholic liver disease;
KW   diabetes mellitus type II; microtubule associated protein; Tau; Big Tau;
KW   ubiquitin B; apolipoprotein E; MAP2; neurofilament-L; neurofilament-M;
KW   neurofilament-F; presenilin I; presenilin II; cellular tumour antigen;
KW   glial fibrillary acidic protein; GFAP; p53; semaphorin III; HUPF-1;
KW   bcl-2; B-cell leukemia/lymphoma 2 proto-oncogene; HMGP-C; NSP-A;
KW   high mobility group protein-C; neuroendocrine specific protein A.
XX
OS   Synthetic.
OS   Homo sapiens.
XX
PN   WO9845322-A2.
XX
PD   15-OCT-1998.
XX
PF   02-APR-1998;   98WO-IB00705.
XX
PR   10-APR-1997;   97US-0043163.
XX
PA   (UYUT-) RIJKSUNIV UTRECHT.
PA   (ROYA-) ROYAL NETHERLANDS ACAD ARTS & SCI.
PA   (UYRO-) UNIV ROTTERDAM ERASMUS.
XX
PI   Burbach JPH,  Grosveld FG,  Van Leeuwen FW;
XX
DR   WPI; 1998-609901/51.
DR   N-PSDB; AAX75767.
XX
PT   Diagnosing disease by detecting frameshift mutations in RNA or
PT   corresponding protein mutations - used to diagnose cancer and
PT   neurological diseases, particularly Alzheimer's disease, and also
PT   for treatment and prevention with specific ribozymes or wild-type
PT   RNA
XX
PS   Disclosure; Figure 16; 258pp; English.
XX
CC   This invention describes a novel method for the diagnosis of a disease
CC   caused by, or associated with, an RNA molecule that has a frameshift
CC   mutation. The method is used to diagnose age-related diseases, especially
CC   cancer and a wide range of neurodegenerative disorders (e.g. Alzheimer's
CC   disease, Down's syndrome, myotonic dystrophy, Huntington's disease,
CC   multiple sclerosis, alcoholic liver disease, diabetes mellitus type II
CC   and many others listed) or susceptibility to these disorders. The method
CC   allows a definitive diagnosis of Alzheimer's disease in living patients,
CC   at an early stage. It is based on the observation that disease may be
CC   caused by mutations in RNA rather than DNA. The invention describes the
CC   used of neuronal system RNA molecules, specifically proteins including
CC   beta-amyloid precursor protein (beta-APP), the microtubule associated
CC   proteins Tau and Big Tau, ubiquitin B, apolipoprotein E, microtubule
CC   associated protein 2 (MAP2), neurofilament-L, neurofilament-M,
CC   neurofilament-F, presenilin I, presenilin II, glial fibrillary acidic
CC   protein (GFAP), the cellular tumour antigen p53, B-cell leukemia/lymphoma
CC   2 (bcl-2) proto-oncogene, semaphorin III, HUPF-1, high mobility group
CC   protein-C (HMGP-C) and neuroendocrine specific protein A.
XX
SQ   Sequence   4 AA;

  Query Match             100.0%;  Score 16;  DB 19;  Length 4;
  Best Local Similarity   100.0%;  Pred. No. 7.8e+05;
  Matches    2;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1 RW 2
           ||
Db       2 RW 3


RESULT 50
AAW70295
ID   AAW70295 standard; peptide; 4 AA.
XX
AC   AAW70295;
XX
DT   06-NOV-1998  (first entry)
XX
DE   Thrombus formation inhibitory peptide derivative 1.
XX
KW   Polyethyleneglycol; PEG; thrombus; side effect; inhibitory peptide.
XX
OS   Synthetic.
XX
FH   Key             Location/Qualifiers
FT   Modified-site   1
FT                   /note= "Optionally attached by CH3(CH2)4CO-,
FT                          CH3(CH2)8CO- and CH3CH(OH)CO- groups"
FT   Misc-difference 1
FT                   /note= "D-form residue"
FT   Misc-difference 2
FT                   /note= "D-form residue"
FT   Misc-difference 3
FT                   /note= "D-form residue"
FT   Misc-difference 4
FT                   /note= "D-form residue"
FT   Modified-site   4
FT                   /note= "Optional C-terminal amide"
XX
PN   JP10182479-A.
XX
PD   07-JUL-1998.
XX
PF   24-DEC-1996;   96JP-0343590.
XX
PR   24-DEC-1996;   96JP-0343590.
XX
PA   (MORG ) MORINAGA MILK IND CO LTD.
XX
DR   WPI; 1998-433772/37.
XX
PT   Drug comprises peptide derivative used to inhibit thrombus formation
PT   - optionally combined with and/or adsorbed onto carrier, has low
PT   side effects
XX
PS   Examples 1-4; Page 7; 14pp; Japanese.
XX
CC   The invention provides a drug composition comprising of a peptide
CC   derivative of the formula (A) R1X, (B) XR2 or (C) R1XR2; where
CC   R1 = acyl or polyethyleneglycol (PEG); R2 = amino, acyl, PEG or
CC   beta-alanine-PEG; X = peptide sequence of 3-47 D or L amino acids
CC   such as the present sequence.  The drug is claimed to inhibit
CC   thrombus formation with low side effect.
XX
SQ   Sequence   4 AA;

  Query Match             100.0%;  Score 16;  DB 19;  Length 4;
  Best Local Similarity   100.0%;  Pred. No. 7.8e+05;
  Matches    2;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1 RW 2
           ||
Db       1 RW 2


Search completed: February 21, 2003, 12:30:55
Job time : 39 secs
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